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INSTALLATION INSTRUCTIONS

**1968-69 CHEVROLET CAMARO
1968-69 PONTIAC FIREBIRD
2DR HARDTOP AND CONVERTIBLE**

THE KIT INCLUDES

- 2) DOOR WINDOW REGULATORS
- 2) QUARTER WINDOW REGULATORS
- 1) 4-WAY SWITCH
- 3) 1-WAY SWITCHES
- 1) WIRE HARNESS
- 1) CIRCUIT BREAKER AND POWER WIRE WITH SELF-TAPPING SCREWS
- 2) DOOR CONDUIT AND GROMMET ASSEMBLIES
- 2) QUARTER PANEL WIRING GROMMETS

(no additional hardware is included)

VEHICLE PREP

- Remove the front seats.
- Remove the rear seat.
 - Both the backrest and lower seat will need to be removed.
- Remove both door panels and quarter panels.
- Remove both kick panels.
- Remove the sill plates.
- Tape any areas of the car you are worried about scratching.

IMPORTANT NOTICE: Prior to beginning your install make note that you will need to have power window glass in your car to complete this install. Early 68s most likely have non-power door glass in the car. To determine if you have power window glass take a look at the 2 pictures below. The one on the left is non-power and the one on the right is power. Both types of glass fit on a 68-69 Camaro but notice the 68 on the left is flat across the bottom and the "69" style glass has the necessary curve to clear the power window motors.



WIRING

Lay the wire harness out inside the car. The wire harness is shaped like the letter H.

The main wire for the 4 way switch and power wire go to the driver's side door.

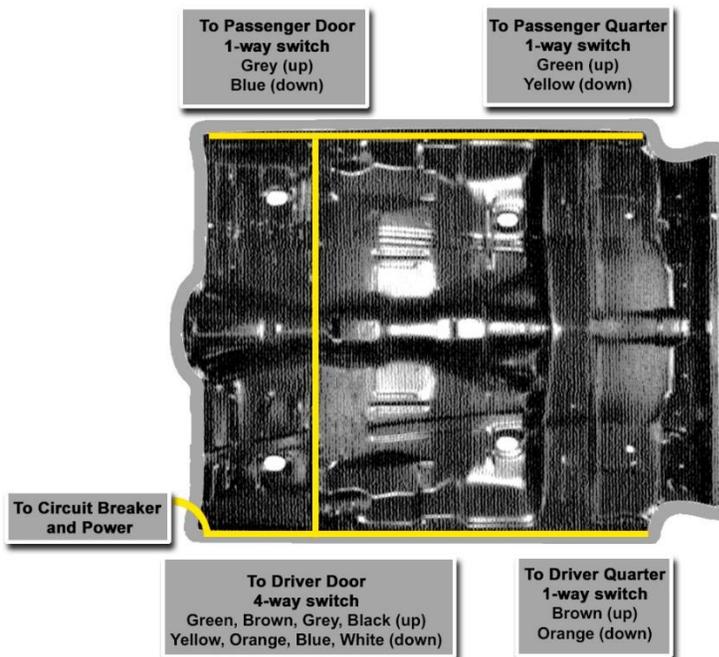
These wires are GREEN, BROWN, GREY, BLACK, YELLOW, ORANGE, BLUE & WHITE).

The BROWN & ORANGE wires go to the driver's side quarter window.

The GREY & BLUE wires go across the car to the passenger's door and the GREEN & YELLOW to the passenger side quarter window.

The wires crossing the car T off at the driver door sill and crosses the car in front of the front seats to the passenger side door sill plate and hides under the carpet. The RED wire in this wire run is for a power seat option and will be unused in most instances.

Install the supplied circuit breaker to the kick panel area of the driver's side and run the main RED power wire to one post on the circuit breaker. From the other post run the supplied RED power wire to a power source such as the positive terminal on the starter.



DOOR DISASSEMBLY

Start with either door

Prior to starting your disassembly mark all nut and bolt locations on the rear track, window stops and window slides/channels with a marker or paint to aid in reassembly. This will allow you to complete the install with little to no adjustment when done.

If you are unsure if you should mark a bolt or nut location before removing it, mark it.



- Roll the window all the way down.
- Remove the rubber end caps at the top of the front and back of the door.
 - These can be held on by screws, clips, or a combination of both. Be careful when pulling them loose as they may also be glued on.
- Remove the bolts holding the window guides at the top of the door and remove them. Again be sure to mark the bolt locations prior to removing the bolts as in this picture.
- Remove the weatherstrip on the outside of the door glass.
 - This could just have a series of screws holding it in place or it could be a screw at the front and back and just clips in the middle. If this is the case use a hook tool to carefully pop the clips free from the door.
- If you haven't already taped the door do so now. You will want to tape any areas you are worried about scratching or may scratch the glass.
- Remove the 2 bolts holding the rear window stop in place and remove it from the door.
- Roll the window most of the way up so you can remove the rear track in the next steps.



- Remove the bolt at the bottom of the rear window track.
**This bolt could be behind seam sealer as it is in this picture.*
- Remove the 2 bolts at the top of the rear window track and remove the plate and the track by tilting the bottom of the track forward to pull it free of the roller on the glass and remove it from the door.
- Remove the 2 bolts at the top of the front window track to give it some play.



- Roll the window down so you can access the bolts that hold the lower window channel to the glass.
- Remove the 2 nuts holding the window channel to the glass.
 - Be careful not to separate the glass from the channel just yet.
- Carefully and slowly roll the window all the way up.
- With the help of a friend holding the glass in place separate the window channel from the glass.
- Remove the glass from the door by lifting and moving it forward and backward as necessary so the bolts on the glass clear the door.
- Slide the lower window channel off the rollers on the regulator and remove it from the door.
- Remove the 2 bolts holding the lower regulator guide channel to the door and slide it off the roller on the regulator and out of the door. The bolts are marked in BLUE in the next picture below in the Door Prep section.
- Remove the bolts holding the regulator in place and remove the regulator from the door.
 - *Hold the regulator in place as you remove the last bolt so the regulator does not fall against the door.*



DOOR PREP

The manual regulator and the power regulator do not share any holes. The RED Xs in this picture show the original location of the bolts for the manual regulator. The GREEN circles are the location of 2 holes already in the door that were unused that you will now use for the power window regulator. The YELLOW circles are the locations of 2 dimples located at the bottom the door. These dimples are the location for the new bolt holes for the power window regulator that you will need to drill.



- Locate the 2 dimples on the door and drill the 3/8" holes for the power window regulator.

To make room for the conduit to be installed you will need to drill a couple of holes. Some Camaros come with a small hole already drilled in the door jam/cowl area and others will have a dimple on the door where this hole is needed.

If you have a hole already located in the door, like in this picture, you will need to drill a larger 1 1/8" hole on center to that hole using a hole saw.



If you do not have the hole in the door you will see a large dimple on the door like the one in this picture. This dimple is stamped from outside the door which can be difficult to drill. The only way to drill this with the door on the car is from the inside of the door but with the dimple going inward keeping a drill bit centered here might be difficult. Do your best, a center punch might be an option if you can get inside the door to do it. Drill a 1 1/8" hole on center with this dimple.



Like the door, the door jam/cowl might already have a small hole drilled. Drill a 1 7/8" hole on center with this hole for the conduit.

If your car does not already have this hole in the cowl locate a spot near the area of the hole in this picture and parallel to the hole in the door and drill a 1 7/8" hole.

**There may be a dimple in the location here to on some Camaros.*



DOOR REASSEMBLY

- Run the wire through the kick panel and through hole and into the door.
- Cut one side of large grommet (came installed on the conduit with the small grommet as well) and place it over the wires and install it into the large hole you cut in the kick panel area.
- Cut one side of the small grommet and place that over the wires and install it into the smaller hole you cut in the door.

The power window regulator does not use the same holes as the manual regulator. This picture shows the approximate orientation of the new regulator when it is installed in the door.



Here are the bolt locations for the 2 regulators. The RED Xs were the locations of the manual regulator bolts. The GREEN circles are the location of 2 holes are already in the door that went unused that you will now use for the power window regulator. The YELLOW circles are the locations of 2 holes you just drilled.



- Place the regulator in the door and locate one bolt hole and install a bolt, just snug for now. After installing that one bolt locate the other 3 and complete installing the hardware to hold the regulator in place and tighten all 4.
- Plug in the regulator and window switch and test the regulator. **If it does not work you may have a ground issue. Proceed to the MOTOR ISSUES section at the end of these instructions for additional information on ground/motor issues.*
- Slide the lower window channel in place on the 2 rollers on the regulator.
 - Be sure to grease up the channel well using a grease like lithium grease.
- Place the glass in the door and locate the front roller and slide that into the front track.
 - Be sure to grease up the channel well using a grease like lithium grease.
- Slide the glass lower into the door and line it up with the lower window channel and slide the bolts on the glass into the 2 holes on the channel and install the nuts and tighten them.
- Slide the lower regulator slide channel over the roller on the regulator and into place on the door moving the window up and down as necessary and install the 2 bolts that you removed during disassembly. Be sure to use your marks to locate the bolts in the correct location. Doing so will help with realignment when you complete your install.
- Remove the tape on the door that you placed during disassembly
- Reinstall the outside weatherstripping at the top of the door.
- Reinstall the rubber end caps at the front and rear of the door.
- Place the rear track back into the door bottom first going forward toward the front of the car.
- Slide the track onto the roller at the back of the glass and rotate it into place.
- Install the lower bolt on the track and only snug it now.
- Install the top 2 bolts using the marks you made during disassembly.
- Tighten all three bolts when you are satisfied with the track location.
- Place the rear window stop back in place using the marks you made during disassembly and tighten the 2 bolts.
- Test the window for smooth operation and adjust as necessary.
- Cut the provided conduit and place it over the wires between the kick panel and the door and through the grommets you installed.

REPEAT THESE STEPS ON THE OTHER DOOR

QUARTER DISASSEMBLY

- Mark all the bolt locations for all the window slide mounting bolts with a marker or paint. Doing this will help you when you complete the install making adjusting easier.
- Lower the window to its lowest position.
- Remove the vent cap on the jam between the door and the quarter.
- Remove the rubber at the top of the quarter jam.
- Remove the outside weatherstrip by removing the 2 screws and use a hook tool to gently pop the clips.
- Tape any area you are worried about scratching.
- Loosen the upper nuts on the slide track identified with the GREEN arrows. Do not take them off just yet. You will be moving the slide track several times
- Remove the nut on the lower slide track bolt identified with the YELLOW arrow.

*You can attempt to do this disassembly without moving the lower adjusting bolt but you may find that you will need to screw it in to give yourself about a 1/4" of clearance between the bolt and the quarter panel hole. You will be moving the track multiple times within the "7" slot identified with the GREEN arrows. Not screwing the bolt in could make this more difficult.



- Move the upper bolts of the track to the bottom of the "7" slot as indicated with the GREEN arrows. Notice the YELLOW arrow pointing to the lower hole where the lower bolt has been pushed inside.
- Snug the upper nuts up finger tight.
- Remove the regulator bolts.
 - **Be careful**, the window is going to be free to remove at this point. If you have not lowered the window to its lowest position have a friend hold the window in place for you as you remove this hardware.



- Slide the roller on the regulator arm off the slide at the back of the quarter window and remove the regulator from the quarter panel through the access hole.
- Loosen the upper nuts on the slide once again to give it some play.
- Lift the glass up and out of the car using the slot toward the front of the quarter panel by the door to help clear the car.

You do not need to remove the track from the car to complete the install of the power regulator but you may choose to do so at this point to inspect it and regreasing it.

- To remove the quarter slide remove the 2 nuts at the top of the slide and remove the slide from the quarter through the access hole.

QUARTER REASSEMBLY

- If you removed the slide track during disassembly reinstall it now at the bottom of the "7". Just snug the nuts up finger tight.
 - Do not install the lower adjusting bolt into the hole. You will wait to do this until near the end of the reassembly.
- Place the glass back into the quarter panel using the slot at the front of the quarter to clear the car.
- Place the roller at the front of the glass into the center slide on the slide track.
**Use the vent hole and slot at the front of the quarter to see in to help you line up the roller and the slide.*

Have a friend hold the glass up and out of the way while you install the regulator.

- Loosen the top nuts on the slide track and bring it to the top of the "7" and snug the nuts again.
**It is ok if the lower bolt is in the lower hole at this point just do not put the nut on the adjusting bolt. You will want the bottom of the track to have some free movement.*

The power window regulator does not use the same holes as the manual regulator. This picture shows the approximate orientation of the new regulator when it is installed in the door.



Again, here are the bolt locations for the 2 regulators. The RED Xs were the locations of the factory regulator bolts and the GREEN are factory holes that you will now be using to install the power regulator.

- Place the regulator in the quarter and slide the roller on the regulator into the guide channel on the quarter glass. Move the glass and regulator as necessary to line this up.
- Locate the regulator in its position moving the glass as necessary to allow the regulator to line up with the holes.
- Install one bolt into the regulator finger tight. After installing that one bolt locate the other 3 and complete installing the hardware to hold the regulator in place and tighten all 4 bolts.
- Plug in the regulator and window switch and test the regulator. **If it does not work you may have a ground issue. Proceed to the MOTOR ISSUES section at the end of these instructions for additional information on ground/motor issues.*



- Loosen and relocate the upper slide track bolts into the position they were in prior to disassembly using the marks you made prior to removing them. Just snug them up again.
 - Be sure to grease up the channel well using a grease like lithium grease.
- You may now install the lower bolt of the slide track back into position. If the upper bolts are in the right place this lower one should be all set.
- After confirming the locations of all 3 bolts tighten them up.

Prior to moving on with the install and alignment of the glass take note that you do not just want to slam the door and thinking everything is in alignment. When it is time you will SLOWLY bring the door close to closing and confirm that the alignment is right.

- If you have not already done so run the wire into the quarter through one of the holes at the bottom of the quarter and plug in the motor and switch and test the quarter window for smooth operation and adjust as necessary.

If you properly marked the location of all the bolts and reinstalled everything where it was you should have little to no adjustment needed. But there is a stop on the new power window regulator that will almost absolutely need to be adjusted prior to finishing up.

- Roll the window all the way up and check your gaps between the door glass and quarter glass and adjust as necessary.
 - Moving the stop forward with limit the quarter window from rolling up as far toward the front of the car and moving it backward will allow it to roll up more toward the front of the car.

REPEAT THESE STEPS ON THE OTHER QUARTER

SWITCH INSTALLATION

DRIVER'S DOOR

- Locate the original window crank hole on the driver's side door panel.
- Cut a 3 3/4" x 1 1/8" hole directly on center for the 4-way switch and retainer.
- Install the retainer clip into the new hole and bend the tabs outward to hold it in place on the door panel.
 - *You may need to widen the hole a little bit to install the retainer.*
- Reinstall the door panel on the car with the wiring pigtail coming through the hole.
- Plug in the switch and press it into the retainer.

PASSENGER'S DOOR

- Locate the original window crank hole on the passenger's side door panel.
- Cut a 1 1/2" x 1 1/8" hole directly on center for the 1-way switch and retainer.

- Install the retainer clip into the new hole and bend the tabs outward to hold it in place on the door panel.
 - *You may need to widen the hole a little bit to install the retainer.*
- Reinstall the door panel on the car with the wiring pigtail coming through the hole.
- Plug in the switch and press it into the retainer.

REPEAT THE SAME PROCESS FROM THE PASSENGER DOOR ON BOTH QUARTER PANELS

MOTOR ISSUES

It is uncommon but from time to time during testing or normal operation of the door motors they may not work properly. The most common cause of this is a ground issue.

The regulator motors ground between the motor housing and the door and the door then grounds to the car through the hinges. If the motor is not working or works intermittently it is most likely because of a ground issue. If there is not a sufficient ground between the motor housing and the door or the door and the car your motor is not going to work properly.

To test for a proper ground run a simple ground wire from the motor housing to a good ground location on the door. If the motor then works your ground between the motor housing and door is not good. In this case clear some paint between the bolt on the regulator and the door and make sure to make an effective ground surface.

If that test does not work then run a simple ground wire from the motor housing to a good ground location on the car. If the motor then starts working it is a ground issue between the door and the car. This can be attributed possibly to new paint or excess grease on the door hinges. In this case you will need to permanently install a dedicated ground wire attached to the door, run it through the wire conduit, and attached it to a good ground location inside the car near the kick panel.

If you have tested the grounding of both and it is still not working it could be a problem with the motor. Testing the motor is easy. Run a simple ground wire to the motor housing and a hot 12v power source to either the red wire or black wire on the motor. The black and red wires are both hot power wires to the motor. One wire powers the motor to turn in one direction and the other powers the motor turn the opposite direction. If this does not work, tap the motor a few times with a light hammer and try again. Doing this helps seat the brushes on the motor. It is also helpful to run the motor up and down (both directions) a dozen times or so after it has gotten moving to assist more in seating the brushes.

If these tests do not work you may have a defective motor. Call 800-828-2212 for more assistance.

