

Power Window/Power Lock Installation

To begin with you will need all the parts listed below:

From Donor Fiero:

Fiero power window regulators

Power window motors (Generic GM type part)

-motors are riveted to the regulator assemblies

Wiring harness from donor Fiero (easiest way to go), but you can do without it for windows

Power window switches and power window plate for center console

30amp circuit breaker from fuse block, for power window and power locks

Rubber tubing between door and car body, wiring passes through it

Power lock motor

Power lock mounting hardware

Power lock connecting rod (3-4" long)

Power lock switches and backing plate (usually one considered one part)

Power lock relay (metal box located on passenger side of donor car)

From local hardware/autoparts store:

8 - 5/16" self tapping hexagonal headed bolts

8 - 5/16" lock washers

Some type of grease, like white grease

2 - 30amp circuit breaker, for fuse block on a Fiero (power windows and power locks use the same one)

Electrical tape

Soldering iron, solder and paste (for better connections)

10 - 10mm, 3/8" long nuts and bolts

Tube of Loctite

Small nut and bolts (total of 4 needed when installing power locks)

Tools:

Small socket set that goes up to 13mm sockets

Assortment of small wrenches

Large philips head screw driver to remove armrest

Assortment of philips and slotted screwdrivers

Drill

Punch (or screw driver will work)

Small hammer

Door panel removal tool

Grinding wheel for drill or a dremel tool with cutoff wheel

Bandages, lots of them

2 - C-clamps

2 - towels

WD40 or similar lubricant

Process:

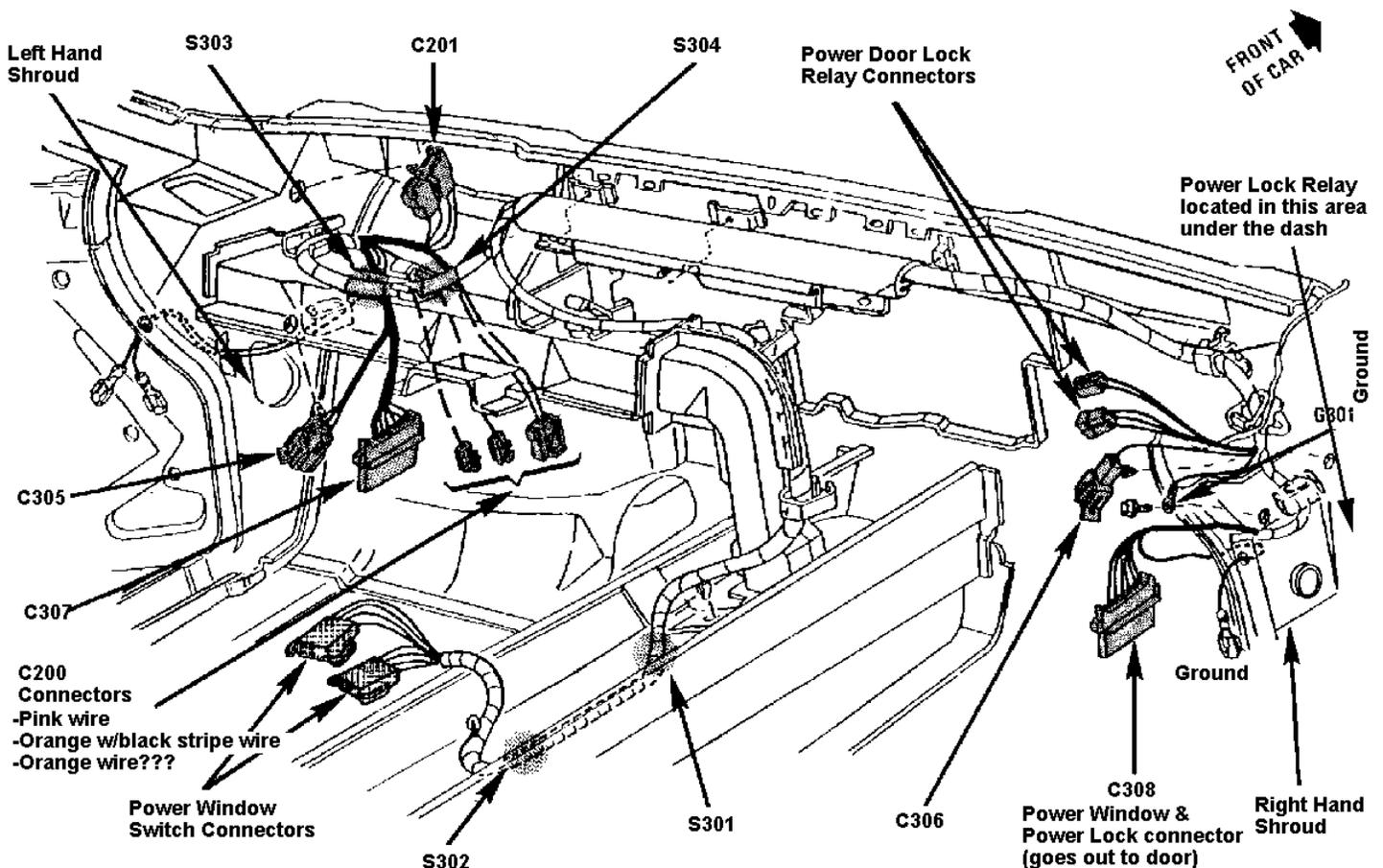
To begin with, get all the parts listed above, and if you get a chance look at the power window motor and locks while they are on the donor car. Take a Polaroid or make a sketch of the setup. Strip down the donor car, taking all the parts listed above.

Start with removing the inside handle/lock assembly. Pry off the "fiero" emblem, and the small round cap with a very small screw driver. Remove the two screws and gently remove the handle plate and the sliding lock cover.

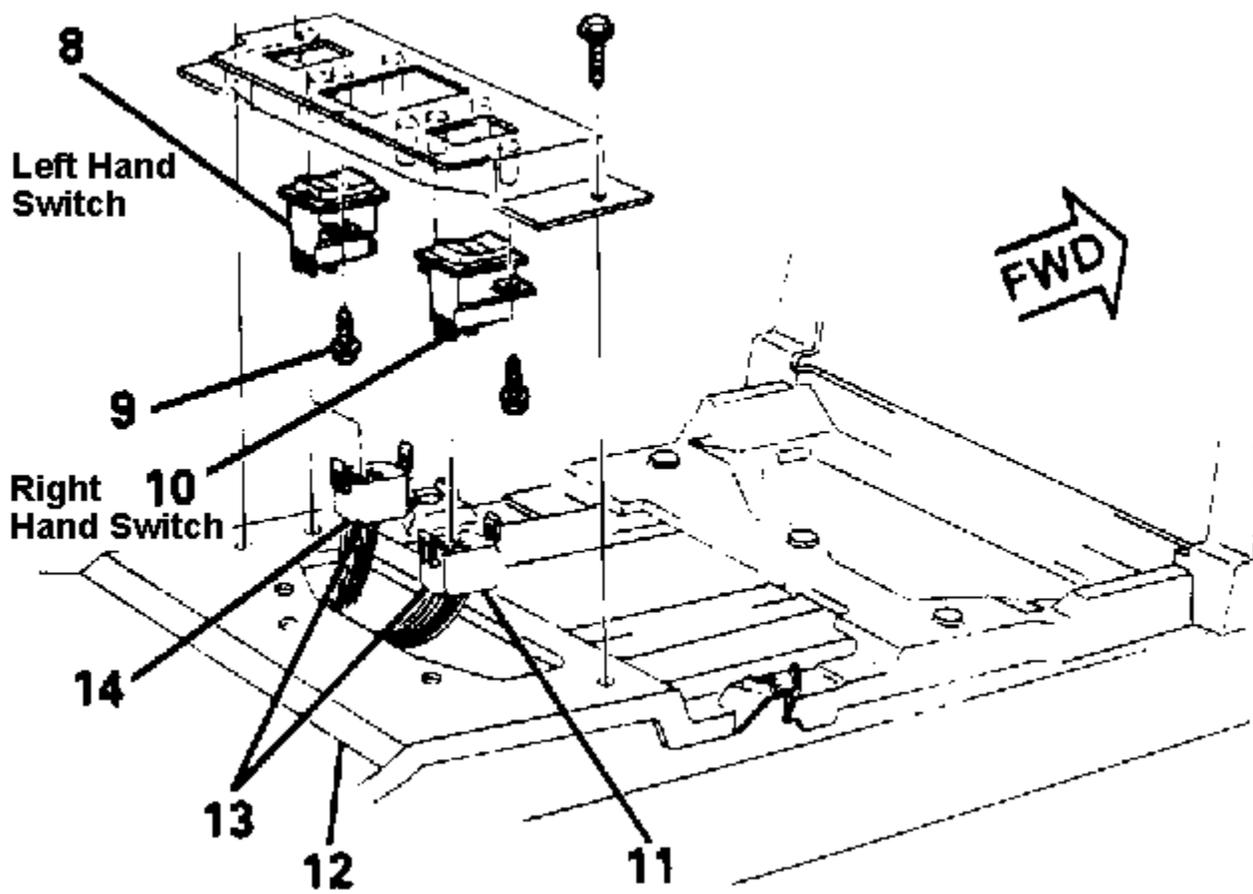
Next, remove the armrest and door panels. There is a door panel removal tool, save yourself some grief and buy it. The “Christmas Tree” grippers that hold the panel door in place are located on the outer edge of the panel. Two of the grippers need to be removed carefully, one is near the door handle and the other is located in the rear upper corner of the door. Use your hand the gently pry the door panel from the frame. If one of the metal brackets breaks off the door panel they can be glued on with hot melt glue.

To get the remote mirror cable off the door panel use a small allen wrench and push the cable through the opening. Set the door panel in a safe spot. Carefully remove the paper moisture guard, using a knife or scissors to cut where necessary, save this.

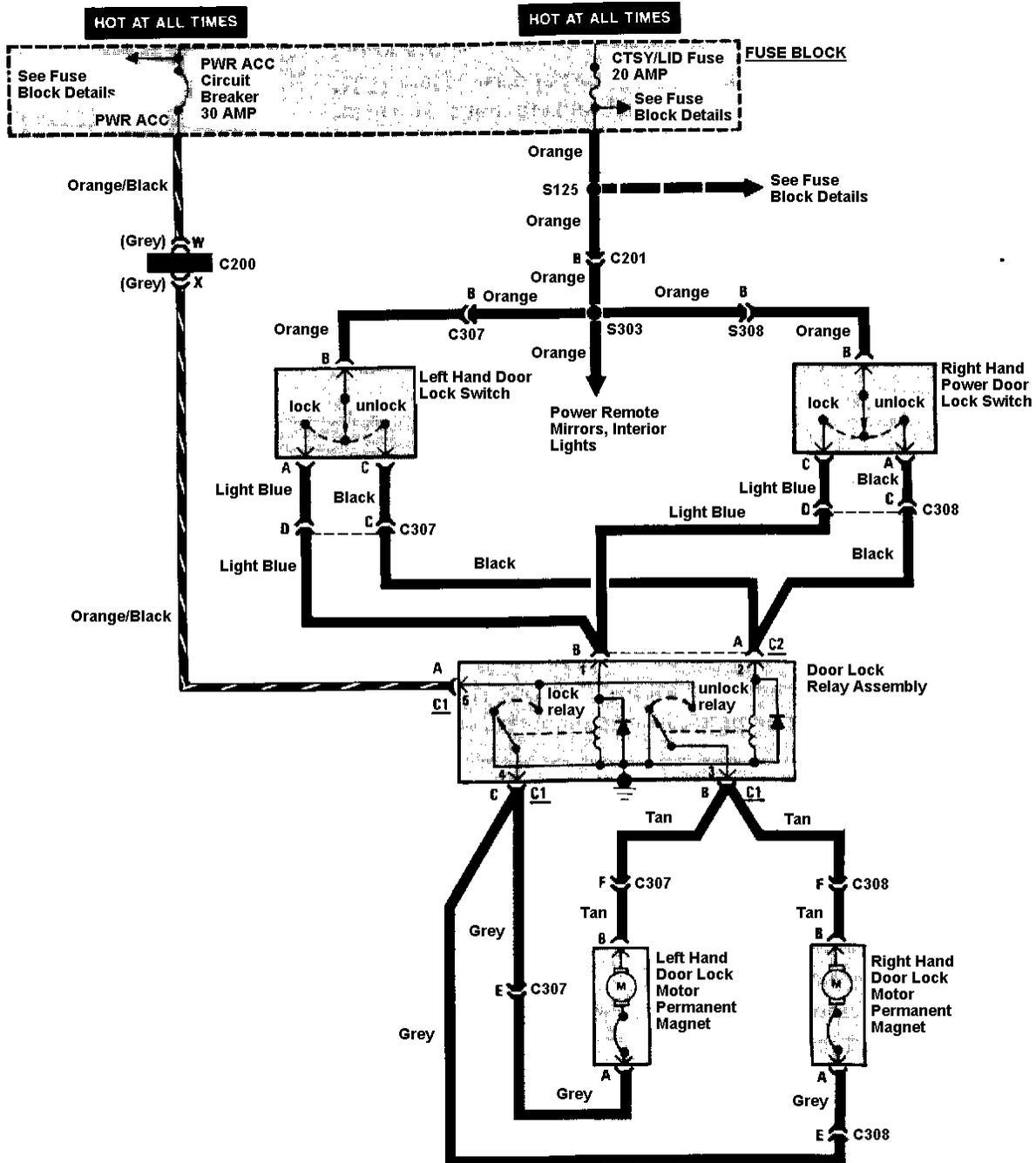
Install all wiring. The power lock relay is attached to a solid part of the car frame, up under the dash on the passenger side and is about 4” X 2” X 2”, silver in color. All wiring going to power locks and power windows should be routed through the rubber connector to the inside of the door. Connect and mount the power window switches to the center console. Run the wiring for the power locks and temporarily install the power lock switches. The only wires needed to connect are the Pink (power windows), Orange w/black stripe (power lock relay), solid Orange (power lock switch), and black (ground). Connect the Orange w/black stripe and the solid Orange to the Orange w/black stripe wire coming from the fuse block (30amp circuit breaker installed); this will supply power to the power lock relay and the power lock switch. Connect the Pink wire to the Pink wire coming from the fuse block (30amp circuit breaker installed). Connect the black wire and the power lock relay to the frame of the car – *passenger side*; this is needed to supply a ground to the power lock and power window system. All the other wires can be left unconnected, they are not necessary, and are redundant since your Fiero probably has the existing wiring installed (ie. the door ajar switch and such). Look at the wiring schematics to the correct wire coloring for connecting the correct connectors to the appropriate; basically the longest connectors go to the power lock motors since they are rear most located motors. If you connect them up wrong the power locks will probably operate the windows ☺.



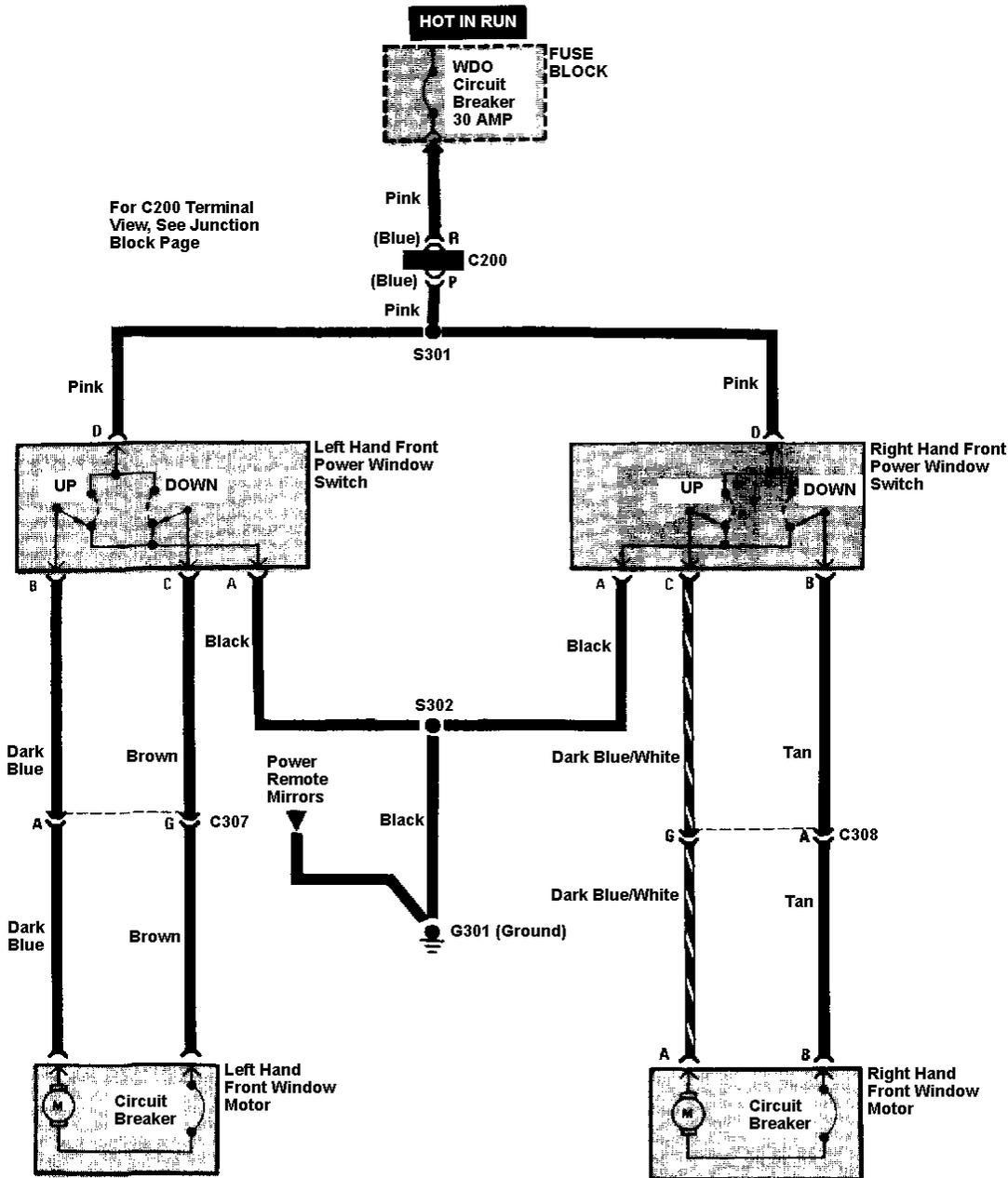
Power locks and windows wiring diagram



Power window switches



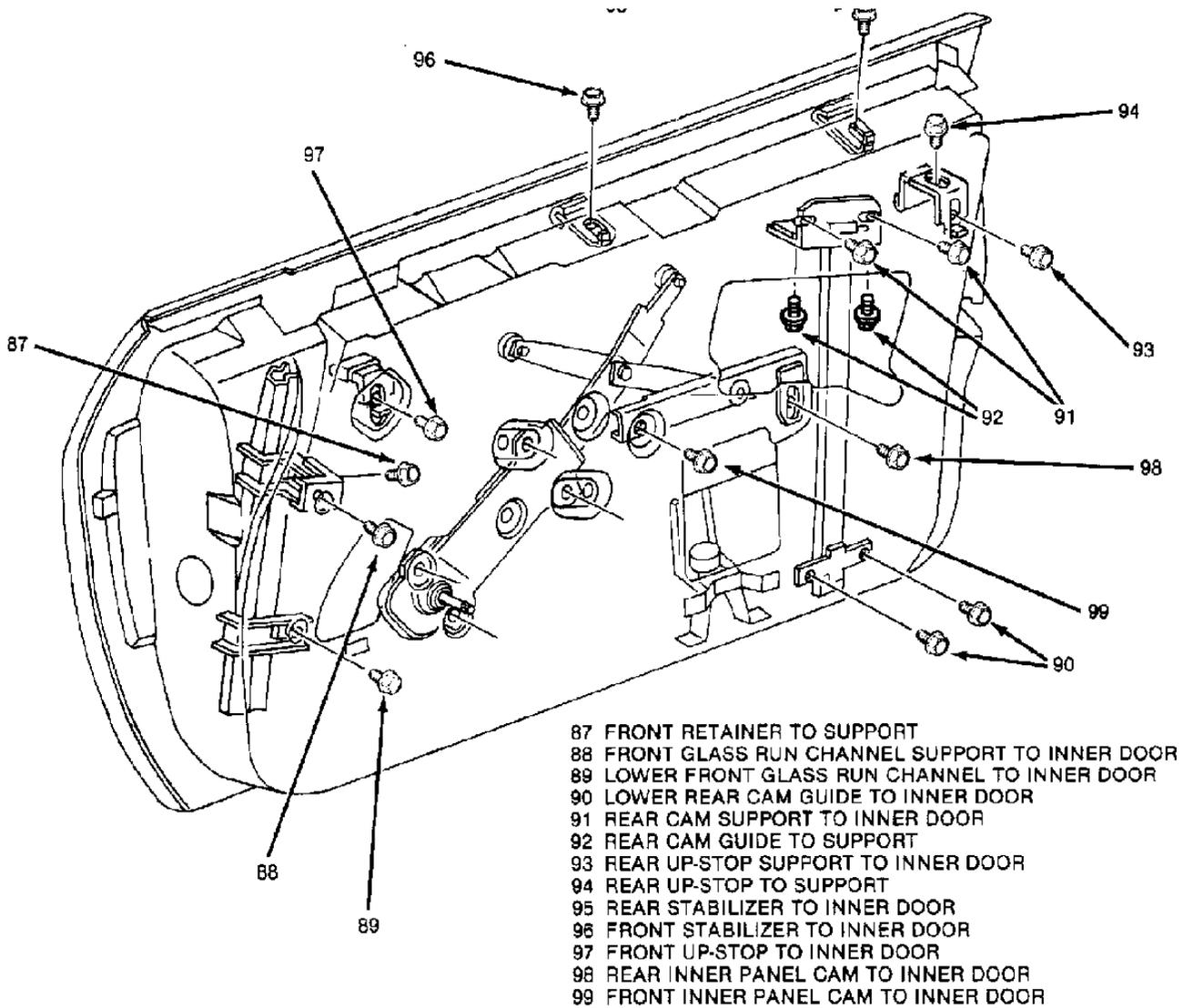
Power lock schematic



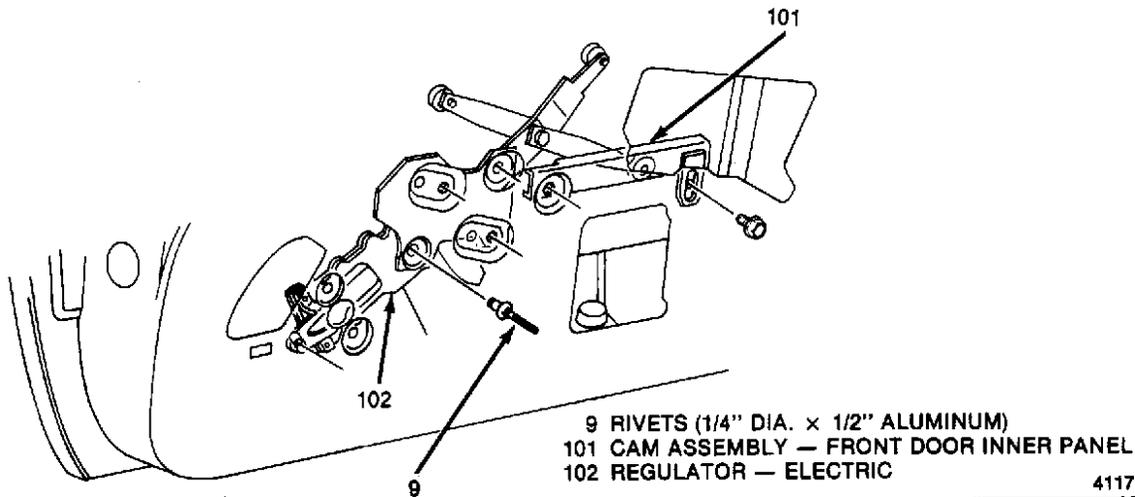
Power Window schematic

Put the manual window crank back on the regulator and roll the window up and down. If much resistance is found adjust the two bolts on top of the door frame. They apply pressure to the window to keep rattles and looseness to a minimum, follow the repair manual on adjusting the window.

Get the two C-clamps, using towels to protect the window, clamp the window in the almost full up position. Locate the 8-10 inch horizontal bar, where the arm rest was attached and drill out the rear most rivet. (Punch out the center part of the rivet then drill out the rivet). Swing this bar up and out of the way. Locate and drill out the 4 rivets that hold in the manual regulator in place. Slide the regulator forward, remove the front wheel from the upper horizontal track. Slide the regulator to the rear and remove the two wheels from the upper and lower horizontal tracks of the window. Remove the regulator out the rear hole, this is difficult and may take a few different tries to succeed.



Manual window regulator



Power window regulator

Apply grease to the window tracks and the wheels of the regulator; also apply grease to the gears of the motor and regulator. Slide the new regulator into the rear opening. You may have to connect the wiring harness and apply power to the motor to get the holes on the regulator to line up with the four holes on the door frame. You can also unclamp the window to help line up the holes. The four holes for the power window regulator are different than the

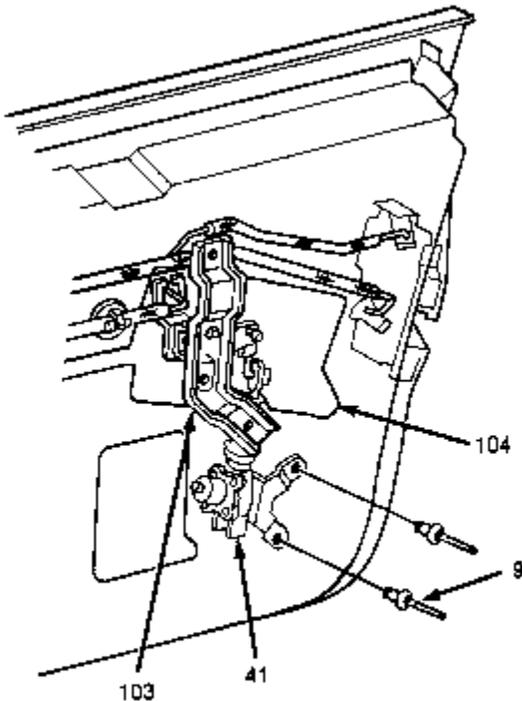
manual window regulator rivet holes. Make sure you put the wheels of the regulators into the corresponding upper and lower horizontal window track. With at least one hole lined up, take one of the self tapping bolts and screw it into the rivet hole. With the treads started back out the bolt and cut it off so it is about 1/2" in length total. Use a grinding wheel or a dremel cutoff tool. Now take and the shorten bolt and re-screw it into the hole. Do not tighten the bolt. With this as a pivot point, line up the other three holes using the power window switch or raising and lowering the window. Tread in and then shorten the remaining three bolts. Use lock washers and loctite on the bolts.

Unclamp the window and check the movement of the window. If everything operates smoothly then you have succeeded in installing power windows.

Incase your power windows did not come with wiring you can connect them as follows. One the rear of the switch there are four blades. The blade with the indentation is the ground. Across from that is the power supply. Next to these is the output going to the window motors. Make sure you put a 30amp circuit breaker inline with the power supply.

Power Lock installation:

Install Power Lock motor, using the 10mm 3/8" bolts, nuts and loctite. Place the looped connector over the locking mechanism rod and install the looped connector bracket with the small screws with matching nuts and loctite. You may have to cut off the extra length of the bolts with a grinder or dremel tool. There are a total of four nuts a bolts used for the lock mechanism. Lubricate all the locking mechanism parts before installation, this includes all existing door parts, WD40 or something similar. Check for movement and correct lock mechanism working.



- 9 RIVETS (1/4" DIA. X 1/2" ALUMINUM)
- 41 ACTUATOR ASSEMBLY
- 103 PLATE — INNER LOCK AT BELL CRANK
- 104 ROD ASSEMBLY — LOCK TO ACTUATOR

Power door lock location

Put the Paper moisture seal back on and then replace the door panel in the reverse order you removed it. Then congratulate yourself on a job well done. Now that you have installed your own power windows and locks, you can add keyless entry. You know where the wires are now! I picked up the base unit from Ziebart for \$90 and

it has worked flawlessly for the past year. I even connected my power trunk release to the keyless entry system. By the way, I installed the trunk release too. The wiring should be in the car, all you will need is the button and trunk wiring/solenoid. I opted to just use the solenoid since having a button on the dash was not a good idea for a convertible. Then I just ran a wire from the solenoid to my keyless entry relay. Total cost was about \$7 for this nice addition.