

Installing Race Seats in a C6Z06 w Passenger Side Air Bags and Seat Heaters

The race seats are UltraShield Aluminum Seats with the Driver's side mounted on Hardbar Rails and the Passenger side mounted on a modified C5 Manual seat track. The Driver's side seat is a 20 degree layback and the Passenger's side seat is a 10 degree layback. A Pfadt harness is used to keep the telescoping steering column operable although if you don't have one you can use a couple of relays plugged into the stock harnesses to do the same thing. That way you don't have to go through the pain of removing the module from the bottom of the stock seat.

This installation takes place in a car that already had a Shark Bar installed. I typically swap seats 2 to 3 times a season.

First, start by moving the seat so the front and rear seat mounts are accessible with a wrench and then raise the seat to its maximum height (this is critical later).

Once the seat is positioned remove the decorative bezels that cover the front seat studs.



Bezel

Then using a 15mm socket remove the nuts that hold the seat in place followed by removing the rear nuts from their studs.



Front seat retaining nut without Bezel



Removing Front retaining nut and Rear

Once the nuts have been removed use some towels or other cover to protect the door frame opening and the door from sharp edges when you move seats in and out of the car. Once you have the door frame protected raise the outside of the seat so a wood block (I use a piece of scrap 2x8x 4 or 5 inches) can be placed under the rear of the outboard seat frame.



Once that is done you need to remove the air bag fuse in the Instrument Panel Electrical Center or remove the Battery Ground Cable (your choice) and then wait at least one minute before trying to disconnect the air bag connector under the seat. While waiting remove the lap belt from the side of the seat frame. This makes it easier to disconnect the air bag connector.



This nut also takes a 15 mm socket.



After the lap belt has been can disconnect the yellow blue retaining pins out and connector outward to fingers on one hand to pull male side out of the female accompanying picture.



moved out of the way and one minute has passed you air bag connector. You can do this by pulling the two then pulling the outside edges of the female side of the unlock the connector. It will come apart if you use the the edges of the connector outward while pulling the side. The female side is on the right in the

Once this is done, you can then uncouple the connectors for the heat functions at the front of the seat. There are two of them. the violet closing lever that is shown at the right side of the left hand is pinching the connector locks on the left side of the right hand to swing the lever to the left to unlock the connector shown in the following pictures.



power/memory and First, is the one with picture. Notice the connector. Use the and disconnect it as



After this connector is out of the way you can proceed to the last connector shown here.



Pinch the connector as shown here to unlock and disconnect it.



Now the seat is ready to be removed from the car. Lift it up so the frame clears the studs and then tilt it inwards so the seat back is resting against the console. If you have car with a removable roof it is much easier to take the seat out if the roof is off. My car is a Z06 so the roof is fixed. Once you have the seat tilted inward with the base of the seat resting on



the door frame you can use your left hand on the front of the seat frame and your right hand under the seat and slowly remove very careful not to hit door upholstery or has sharp edges that put chips in fiberglass plastic door sill.



seat back to raise the it from the car being the rails against the door frame. The frame can cut upholstery and or severely scratch the

With the seat out the harnesses underneath look like this.





This picture sort of shows a modification I made to my car that makes it easier to use Hardbar Seat Rails. The harness shown on the left normally runs along the side frame rail until it is further to the rear than the seat stud and then turns inward and comes out of the slit in the carpet. This harness is quite thick and should be moved if you are going to use a flat rail to mount your seat. I pulled the carpet up and slit the main harness running along the frame rail so I could break out the seat harness ahead of the seat stud and run it toward the center from there. The shiny tape seen above the stud is what I use to hold the harness in its new location so it doesn't go under the seat rails.

Now comes the hard part. To keep the Telescoping Steering Column function the Pfadt harness requires the use of the Memory Module that is mounted to the stock seat springs under the seat. This is the main reason why the seat had to be raised to the maximum height before the power was cut. If the seat isn't at its max height it will take some mighty small hands to get the module out. The module is the black box with the bar code strip on it.



The module has several tangs that hold it to the springs and three connectors that have to be disconnected as shown here.



Once removed this is what it looks like. Notice the blood that is on my hand that wasn't in the previous picture.



The Pfadt harness connects between this box and the forward seat connectors in the car. This is the Pfadt harness:



This seat
right



picture shows the harness in the car and connected to the harness and the memory module. The tangs that hold the module to the stock seat springs can be seen on the left, and bottom side of the module in the next picture.



The air bag connector will be taken care of next. The Pfadt harness includes a plug with a resistor that simulates the load of the air bag which makes the air bag light go off.



Insert the plug into the car's air bag connector and insert the retaining pins so it will not fall out.



Once that is done I tape everything down and install the Hardbar Stud Extenders.



Once these items are installed I install the I/O Port Seat Back Brace (all aluminum seats require a seat back brace to keep the back from breaking in an incident). The brace is fastened to the back of the seat and the SharkBar.



The lap and sub belts have been preinstalled on the seat and the shoulder harnesses were preinstalled on the SharkBar so all that remains is to mount the seat in the car, fasten the back brace and fasten the seat to the Hardbar Stud Extenders.



Installation is the reverse of taking out the stock seat. First tilt the top of the seat into the car and push it so it is over the center console, then lift it in and very carefully lift it so it can slide over the stud extenders. My seat even though mounted as low as it can go will actually touch the top of the car when installed so this is a tight fit.



Seat sitting on door frame ready to be tilted into car.

Seat Brace fastened to back of car and pin inserted.

This is where the seat hits the top of the car, right beside the rear of the door glass. Just one small spot but that makes it tight to get the rail over the stud extenders.



Seat rails fastened to Stud Extenders

The final thing to do is to fasten the stock lap belt end so it isn't flapping around while the car is moving. I use a zip tie to fasten it to the Hardbar rail.



Now on to the Passenger Seat. The story is somewhat the same here. I have an 08Z that I updated with a Passenger side Power Seat Track and inflatable Lumbar/Bolster supports in 2012. Before that I had an OnStar module located under the passenger seat and had to use the C5 seat track to get the seat high enough to clear the OnStar module.

Removal of the passenger seat is similar to the driver seat. First, remove the nuts holding the seat down. Then tilt the seat inward so you can remove the stock lap belt from its mount on the side of the seat.



The two pictures above show the seat tilted on its side with towels placed to protect the door sill and opening. The open space in the carpet is where the OnStar module was located before I moved it to a place in front of the glove compartment so this installation is identical to what you would see in any 05-13 Base/Z51 car or all models from 10 through 13. Only the 06-09 Z06/ZR1 cars would have the OnStar module in this location.

The picture below shows the rear of the seat with the yellow Air Bag connector and the lap belt connected to the seat track. Disconnect all electrical connectors under the seat and from the lap belt mount.



Astute observers may notice two extra red wires in the picture on the right. These provide +12 VDC to my added seat track and are not seen on a stock setup.



Other than the lap belt not being removed when the seat is ready to be removed it will look like this.

The boards keep the sharp feet off the sill and allow you to grab the seat, lift it at this angle until the seat back can be pushed on top of the console. Then the bottom of the seat can be raised far enough to pull the seat out. Be careful while pulling the seat out as the feet will gouge the plastic of the door opening or the door upholstery. Once the seat is out all you have to do is install your race seat.

This is what it will look like once the seat is removed. After the seat is removed install your shoulder belts on your harness or roll bar. These belts are fastened to a Shark Bar.



Make sure they are triple wrapped. This picture shows the belt coming through the binder running around the harness bar from the bottom, going back through the binder toward the front of the car and then going through the binder a third time toward the rear of the car. If you don't do that last loop through the binder the belt will slip through the binder if a strong force pulls on it.



The picture below shows my race seat mounted on the C5 seat track ready for installation in the car. The seat track was modified to add lap and sub belt mounts as the subsequent pictures show.



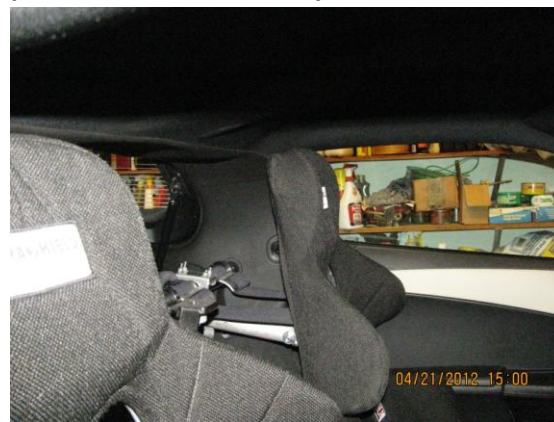


It is basically a drop in and bolt down operation from this point. Here is what the seat looks like once it is dropped into the car. Once it is in I adjust the seat track to the point I want it, remove the adjuster handle to make room for my fire extinguisher and bolt everything down and then install the back brace to the harness bar.





These seats are 17 inch Ultrashields which permit a pretty large person to fit in them. If you have a 42 inch waist you will fit in these



seats. I take a number of passengers for rides and have found I cannot adjust the belts to handle all comers. If I adjust the belts for small people they don't fit people the belts will be used due to the adjusters have to be

around large people. If I adjust for large not tighten on a small person. Pull up belts difficulty of using pull downs In a Vette so the inside the seat so they don't accidentally get released in an incident. This limits adjustability to some extent. A person with a large girth may into the seat but the fit is so tight the lap belts can't be adjusted because they are clamped between the person and the side of the seat.

If you want to have the telescoping wheel operable then you need to use the Pfadt harness and the OEM seat module or you need to use two relays and connect them into the car's driver's side seat connectors.

The first time I did this I spliced the relay wiring into the Pfadt harness so I could use its connectors. The relays work fine and will actually allow the wheel to move just a little more to the rear although it will make a slight jump to the left right at the end of its travel. This picture shows the two relays spliced to the Pfadt harness.



I am in the process of documenting a circuit board build that will eliminate the need to splice into the Pfadt Harness. Just need to get a few more stock connectors and a box to install the circuit board in. If you install two race seats the Pfadt harness will not prevent the air bag light from lighting since you have to do something to fool the passenger side air bag sensor. However, even with the light off the front passenger side air bag will not inflate since the passenger presence sensor is missing. If there is no signal from that sensor the air bag will not deploy.