

## 2006 R500 Hitch Installation Instructions

Hidden Hitch model # 87413. Trailer tongue weight capacity is #350. Trailer gross weight is #3500.



- (1) First thing to know, this job will take some time to do. It took me 5 hours to do it, but I had issues and will explain later on. Hopefully these instructions will help you avoid the issues I ran into and allow you to do the installation a LOT QUICKER.
- (2) You will need to get the rear end of the car up in the air, I used two floor jacks, but a good set of ramps will work also and probably would be easier.



- (3) I took a heat gun and removed all of the ugly stickers on the hitch. There were 4 stickers on the thing and at the time, did not realize that NONE of them were going to show once installed. So, don't waste your time on removing them. After removing the stickers I put on a good coat of wax on the hitch – don't know if it will actually help keep the thing from rusting, but it only took a couple of minutes to slap some wax on it.

(4) Once car is up in the air drop the left and right mufflers



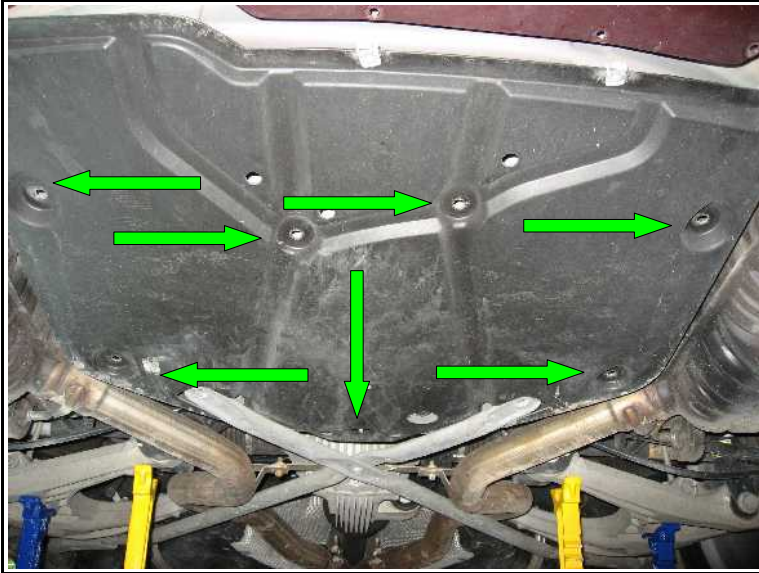
- (5) You have to take 2 bolts out of 4 exhaust clamps. There is a left and right clamps. I think these were 10 or 13mm bolts. In the above pics, you are looking at the left & right exhaust clamps. There are 2 more up in the rear fender wheel right above the muffler itself.
- (6) Something I learned AFTER I finished this job, you may be able to remove the chrome exhaust tips if you are worried about scratching them up during the hitch install. I did not do this myself, but got quite close to scratching them several times when I tried to maneuver the hitch into place. There is a screw under each muffler tip, remove it and it looks like they should just pull off.



- (7) You will need a long extension or two to get to these bolts, I also used a wobble socket to help get to the the bolts. There will be a lot of dirt dropping from this area, wear some safety glasses or end up running to the bathroom to dig dirt out of your eyes...trust me on this.
- (8) Now the exhaust should drop down a couple of inches.
- (9) Remove the bolts holding the rear bumper cover on, you will see the where I am talking about in the pics below



- (10) Now remove the black plastic trunk cover plastic nuts.



- (11) The black trunk cover should now drop down near the rear bumper cover (see pic below). It will not come completely out of the car, you don't want it to. You are dropping it in order to do 2 things, one is to cut a piece of it off to allow clearance for the hitch and the other is to allow the hitch to go in behind it and bumper cover.



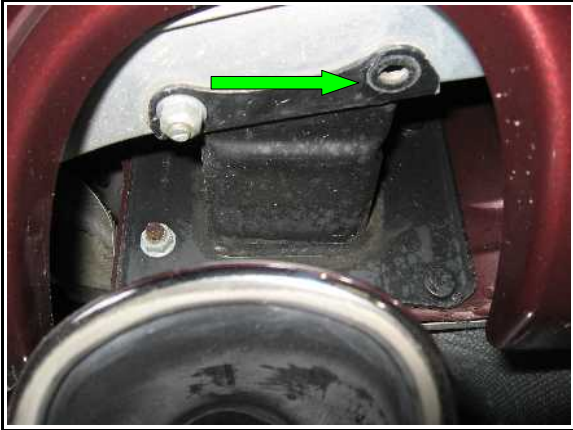
- (12) You need to cut out some plastic off of the black trunk cover in order to allow clearance for the hitch. The hitch instructions said to cut out this area (see pic below)



- (13) After I installed the hitch, it doesn't look like I needed to cut so much of the truck cover out (see pic of hitch after installation below to see where the hitch would have hit the trunk cover). I will leave this decision to you as to how much to cut out. I just followed the included instructions.
- (14) I used a razor blade knife to cut the plastic. Did this by scoring the plastic a few times, then the razor blade cuts right through the plastic. Takes some time and be careful, sometimes the razor blade can suddenly slip and anything in path, like fingers, can get cut. You can see what gets cut out by the pics above. You will lose one bolt nut clip, so at the end of this job you will have one bolt left over.



- (15) Time to mount hitch: A word of advice here, to mount the hitch, secure it with the two bolts near the muffler tips. But, first you will have to remove the two bolts on the bumper frame support. This is the bolt nearest to the center of the car on each side. See green arrows below for the 2 bolts you should remove. You will need to reach up into the bumper cavity in order to grab the head of the bolt and pull it up and remove it from the car. These will be replaced with longer bolts when you mount up the hitch to determine where to cut the bumper cover – next step you will do.



- (16) Now it is time to mount the hitch. This is another one of the places that I had issue with. First the thing is freaking heavy to hold and bolt by yourself. I suggest getting a good floor jack covered with a cloth to keep from scratching the hitch and rest the hitch on it and raise it into place. You will have to pull the bumper cover back and slide it in between the trunk cover and bumper cover. **\*\*Warning\*\*** watch your exhaust tips, the hitch will come real close to them when you try to maneuver it into place so that you can bolt it up. I put my hand in between the hitch and the exhaust tip on one side and my wife (gotta love her, she helped me almost the whole time I did this install) did the same on the other side. Once you have it lined up with the bolt holes you just took the bolts out of near the exhaust tips, grab the long bolts from the hitch install kit, put on the washer, reach up into the bumper cavity again, find the whole, drop the bolt down into it and through the hitch hole, add the washer with the teeth on it from the install kit and spin on a nut, finger tighten it. I fought with this for a while to get the holes to line up, I ended up tilting the hitch to one side on the jack (my jack was not tall enough) and once I got one side on, I lifted the other side up by hand and bolted it up. Now use a ratchet and tighten them up to get the hitch flush with bumper brace. This is where you need to mark the bumper cover in order to know where to cut the rectangle notch out of it so that it can slide back and line up with the trunk cover holes. Read next steps to understand this task more.

- (17) Next thing you need to do is cut the rear bumper cover in order to allow the bumper cover to slide back far enough to catch the trunk cover bolt holes. See pic below, you will have to cut out a rectangle piece of car bumper cover plastic.

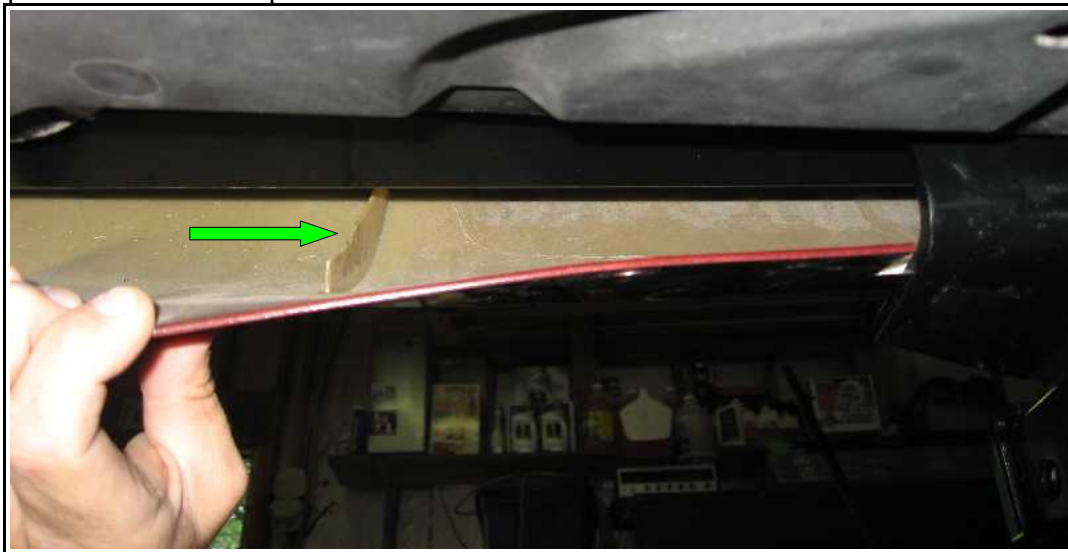


- (18) This is one of the areas that took me so much time to do. First I had to temporarily mount up the hitch in order to figure out where to cut the bumper cover. Then I marked the bumper cover with a grease pencil to show how far left to right to cut it. I would suggest to tape off the bumper cover in this area with paper tape and mark it using a pencil. What you will not know is how deep to cut the bumper rectangle. I made my first cut and it was about a 1/2" too little, so I had to do it again to get it cut deep enough that the bumper cover could slide back enough to line back up with the trunk cover holes. You can see the issue in the pic below, the bumper cover hits the hitch and will not slide back far enough to get the holes in the bumper cover and the trunk cover to align over top of each other.



(19) Cutting the bumper cover was hard, mainly because I really didn't have good tools to do it. The razor knife just didn't work well and I was concerned it would slip and scratch the paint. I ended up using a razor blade cutter thing I had from Sears (looks like heavy duty sheers/scissors) and it would cut through the bumper cover with no issue, but I could only cut 90 degrees to the cover with it, so I made a whole bunch of cuts the length of the rectangle of plastic I wanted removed and then took my razor blade knife and cut each little section/tab of plastic off one at a time. You might have a better way of cutting this out. I just took my time here and as I said I had to do this twice since the first time I did not cut the bumper cover rectangle deep enough.

(20) You now need to cut some bumper cover plastic in behind the cover that will hit the hitch when you go to try to bolt the bumper cover back up to the trunk cover later on. This needs to be done only on the passenger side of the car, the driver side does not have this plastic piece. See pic again below for the piece of plastic that I am talking about. What I did here is I took my razor cutters, clipped the plastic straight back to the bumper cover in about 3 places that I thought would be where it will hit the hitch and then I bent them over to the right laying them flat on the bumper cover. That's it, the bumper cover now can be pulled back to line up with the trunk cover holes.





- (21) Attach hitch at the rear. You may need to loosen the bolts near the muffler tips in order to get the other 2 bolts installed near the cross support braces (see pic below). Note: if you don't have the Panorama roof, there is more work to do here and I can't help you with that. Basically you have to add some metal supports in this area to support the hitch, drilling and more plastic trunk pan cutting is involved in this. You will have to follow the included hitch instructions for this since I did not need to do this on my car. One good suggestion for you here – you have to add two washers to each side in between the hitch and the cross brace. Since I had the hitch bolted up in the front already, I had very little space here to slide the two washers in between the brace and the hitch. Not having room caused me issues when I tried to stack the 2 washers on top of each other and slide them in between the hitch and cross brace, they fell out many times, came unstacked and generally caused me hell. So, I ended up loosening the front bolts and letting the hitch drop down some, then I super glued the 2 washer together, slid them into place, grabbed the new longer bolts, put on the washers with the little teeth on them and ran them up into place – almost!! The freaking holes did not line up and I fussed with this for an hour and a half. I eventually had to undo the front bolts all together, attach the rear ones and then re-attach the front ones. I hope you have better luck. The hitches holes have no left to right slack, but are cut oblonged for front to back slack, of course I need left to right movement. Anyway after some time, cussing and walking away getting a cold drink, I came back and got them to align and bolt up.



- (22) Tighten the front hitch bolts up. The hitch is now bolted up to the car. Time to put everything back together. Start with the exhaust hangers, all 4 of them, starting with the ones in the center of the car first and then the ones on top of the mufflers.
- (23) Install the plastic trunk pan plastic nuts
- (24) Install the bumper cover bolts (remember that you will not use one of them, you will have one left over)

- (25) Hitch is now installed. Step back and admire your handy work.



- (26) You know what, this just doesn't look quite right. It needs something. Ahhh, that's it – Go IU!!

