

C5 Rear Carrier Install by Dope

First things first, get the car in the air. Higher is better. I drive the front up on ramps, and then jack the rear crossmember quite high (2'+). Jackstands go under the frame rails on the sides. I double up the jackstands and then put the rear wheels/tires under the sides just in case. Looks like this when you're done:



Remove the rear brake calipers from their brackets (2 15mm bolts each). Stick the calipers into the gas tank heat shields to get them out of the way (see below picture). Tie-wrap the brake pads to the caliper brackets so that they won't fall out and get lost. Undo the top 2 13mm bolts on the shocks. You can alternatively undo it from the bottom, which is a 24mm nut + bolt. It's more cramped down there though. Doesn't really make a difference - I've done it both ways and it's a bit easier to do it from the top. Undo the 2 18mm bolts at the top of the upper control arm (you can alternatively remove the upper ball joint instead, but that is a bigger pain - it's crowded and the control arm doesn't really want to separate easily). Pull the halfshaft out of the differential (you can use a prybar, or just do as I do and yank on the top of the spindle and it'll pop right out).

Disconnect the small 2 pin wiring harness right near the ebrake. Remove the ebrake cable from the back of the spindle. Pull the ebrake cable out of its bracket. This part is a little tricky - there's 3 tabs to press in to be able to yank the cable. I used a small set of vice grips to hold 2 tabs in, then used a screwdriver to get the third.

Repeat all of this for the other side.

When you're done, it'll look like this:



Undo the 2 15mm bolts that hold the over-axle pipes to the midpipe. You can wire/tie wrap through these holes onto a nearby bolt (there is a handy one on the side of the tunnel) to get these out of the way. If you are also swapping the mufflers, wait until you get the drivetrain out, they will be free and clear then. If you're not swapping the mufflers, leave them like this, they will be out of the way. Pull the midpipe (I have headers, I just undid the clamps and yanked the midpipe out). There will be 2 13mm bolts hanging from springs near the back, don't forget those. Watch the O2s sensors - pull the clips on the sides of the tunnel to prevent from stressing the wires. Undo 36 8mm bolts (hope you have air tools!) from the tunnel cover and remove it. Now it'll look like this:

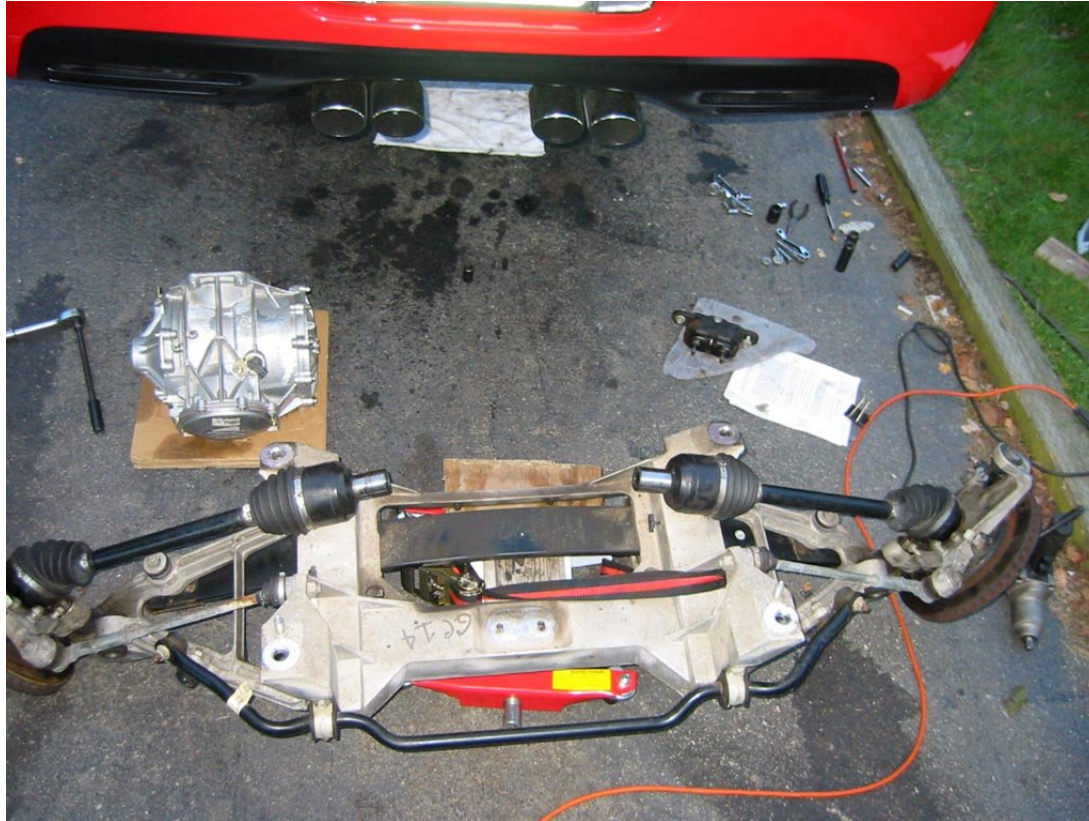


Disconnect the intake tract from the TB to prevent from over stressing these parts when you lower the drivetrain in the next step.

I highly recommend you have at least 1 tranny jack for this next part. 2 is better - they are pretty cheap at Harborfreight.com. One under the rear suspension cradle and one to remove/reinstall the diff by yourself. Remove the 4 nuts holding the cradle to the car (21mm I believe). NO IMPACT TOOLS. Using impact tools can break the retaining rivet that prevents the large studs from rotating. If you do this, you will have to remove your carpet, and cut an access hole in the floorpan of your car. Not fun. Ask me how I know. Remove the 2 15mm nuts holding the the tranny mount to the subframe assembly. Slowly lower the rear subframe assembly, watching for obstructions. The brake lines will pass in the space between the rear diff and the halfshafts that you have disconnected. Remove all wiring and brake line plastic push-pins that are attached to the rear cradle. Go slowly and KEEP looking for stuff to disconnect. There is a small wiring harness on top of the diff for example. You can go pretty low with this:

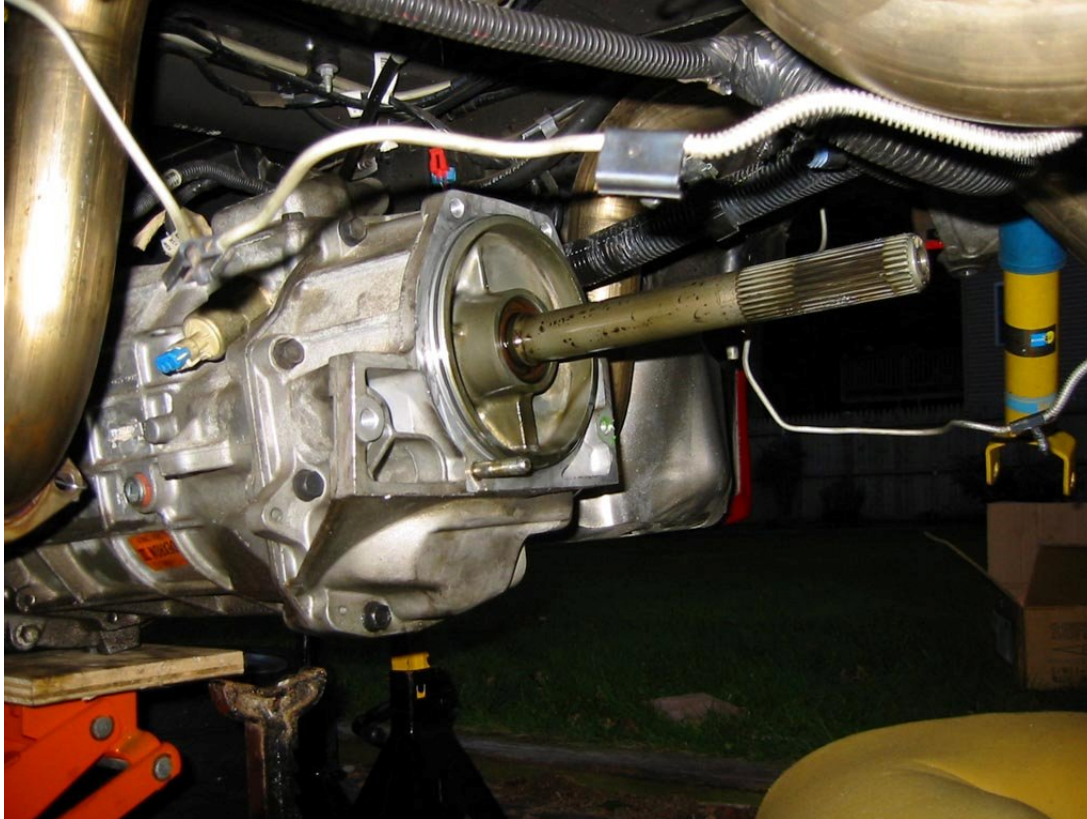


I see a lot of people warning about hitting the firewall with the back of the engine. I don't think this is much of a concern. I watched the back of the intake, and the plate over the driver's fuel rail and they never came close to hitting. I stopped once the top of the rear diff was almost even with the bottom of the tub that hangs down in the back of the car. Place a jackstand or a jack underneath the transmission to hold it in place (even a spare tranny jack will work here). Now lower the subframe all the way and pull it out from under the car:

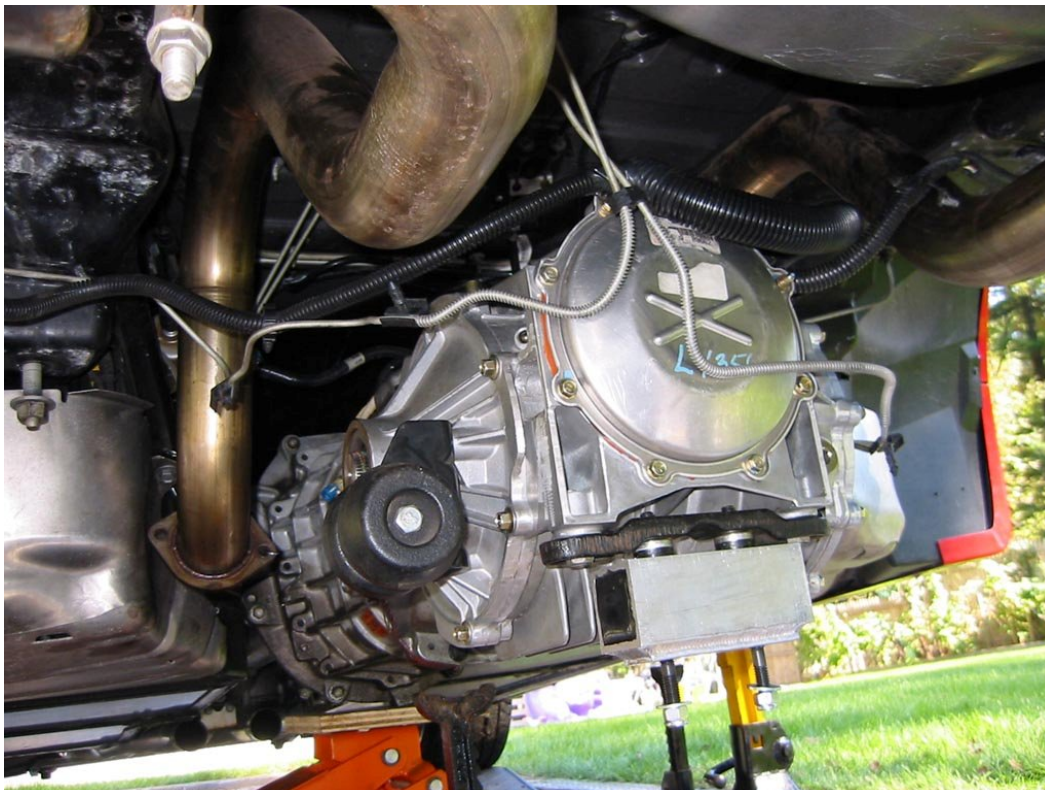


Get out your drain pan, pull the drain plug on the underside of the diff, and drain the fluid. Remove the tranny mount from the rear diff (2 15mm bolts on the underside of the diff). Undo the 2 13mm bolts on the top of the diff, and the 3 15mm nuts on the sides and bottom. Yes, there are 3 - watch for the one that's buried on the underside.

Now grab your 2nd tranny jack, and put it underneath the rear carrier. Pull the rear carrier off of the transmission. You may have to pry it a bit at the start. If you lowered the rear enough, you should be able to pull it right off the shaft without hitting anything. Once you've cleared the shaft, lower the tranny jack, and roll it out from under the car.



Swap the vibration damper (2 heavy round circular objects), any sensors, fill plugs, etc.. Put the new diff on the tranny jack, slide it under the car, jack it up to the right height, and slide it on the shaft coming out of the transmission.



(Note: your tranny mount will look different. This is a VBP poly tranny mount)

Pretty straight forward from here. Tighten the carrier to the tranny with the 2 bolts and 3 nuts, re-attach the transmission mount. Bring the subframe back under the car, raise it into place carefully. I recommend red loctite on the 21mm nuts that hold the subframe in - don't want those coming loose. To put the half-shafts back in the diff, get them started by pushing on the ends closest to the diff with your hands. You need to get it 'started' over the c-clip that's on either end of the diff (look closely, it's about 1/4" inside the diff, on the splined shafts). This can take some wrestling. Once you've got it started, you can 'hammer' it the rest of the way by pushing on the spindle. It's tricky the first time, easy the second time.

All done!

-Dope