

GM made the Cadillac Eldorado with four wheel 11.75 disc brakes for only about two and half years, and because of low sales, remanufactured calipers for the rear discs with the parking brake provision have become non-existent. While the aftermarket has turned out a few replacement options, primarily for the four-wheel community, the overall lack of adequate documentation has frustrated their installation and resulted in uneven satisfaction with their operation. If you've decided to go ahead with this conversion or are adding this parking brake caliper on an existing conversion that used front calipers without a parking brake because your state requires a parking brake, know that these calipers will work exceeding well provided they are installed and set up correctly.

Reading these instructions thoroughly before you get going will make all the difference, as these calipers are not bolt-on and bleed like a standard set of calipers. The mechanics behind why this is will be explained below to help you understand how these calipers work, but we'll start with getting them on and working. If you're coming back to these instructions because your calipers are already on but aren't working, take a deep breath, This should get you back to where you need to be and your calipers working as intended.

1. Take the calipers out of their packaging and give them a once over to make sure nothing got damaged in shipping, that the clips/pads are in place, and that the pistons haven't extended out into the calipers.
2. With your rig up on jack stands and the wheels off but the brake rotors on, bolt on the new calipers, making sure the bleed valve is at the top (that is, above the brake line hole). Don't hook up the brake lines yet or put any fluid in the calipers yet. **The calipers must be adjusted DRY or your brain is gonna be in a world of hurt!** Once the calipers are on, remove the return spring from the parking brake lever on the calipers. You can use a spring compressor, a screw driver, or if you're some kind of *hoss*, maybe even your hands. This is a good time to get some safety glasses on, the spring is no joke and it's already under tension, so if something slips and it decides to rocket at your face... let's just say a stupid looking bruise is better than missing an eye.
3. With the springs safely out of the way, grab an 11/16th wrench and remove the nuts that hold the parking brake levers on the calipers. Slide the levers off and carefully remove the rubber seals and teflon washers that sit between the lever and the caliper. Set these aside and pay attention to how they came off. The rubber seals have a slight cup to them which should go over the teflon washers and against the caliper body.
4. Using the parking brake levers, turn the mounting bolt in the direction of cable pull (counter-clockwise on the drivers side, clockwise on the passenger side) until the caliper pistons are fully pressing the pads against the rotors. At this point, the levers should be about $\frac{3}{8}$ " to $\frac{1}{2}$ " away from the stops (if not jump down to **X**), rotate the levers back so that they rest against the stops and (while holding the lever in place) verify that the rotors can be turned by hand. Remove the levers, reinstall the teflon washers and rubber seals and then the lever. Make sure you have the levers on the correct caliper and that they're oriented with the spring retaining tab facing down. Screw the nut back down on the parking brake lever and tighten it up. Turn the levers in the direction of cable pull and verify that they only have to turn about $\frac{3}{8}$ " to $\frac{1}{2}$ " away from the stops before they completely engage on the rotors. If they have to turn more than that, go back a few steps and adjust them again. If you can't get them into this range, see **X** below.
5. Attach the parking brake cable housings and pull the the cables a couple inches past where they'll hook into the parking brake levers. Get your safety glasses back on and reattach the springs. This is a good time to set up a swear-jar so you'll have some money set aside for a beer later.

6. With the springs back on, hook the parking brake cables into the arms and push/pull them tight against it. Connect the rest of your parking brake linkage and, with all that nonsense adjusted, it should only take a couple of clicks to get the parking brakes fully engaged.
7. NOW you can hook up your brake lines and bleed the calipers. With that done, the wheels back on and tightened down, and the thousand other things checked off your build list you're all good to go!
8. Lastly, these calipers require that the parking brake be used frequently to maintain functionality. So every time you park you should set the parking brake. This allows the calipers to self adjust for brake pad wear, and honestly it's a good habit to get into.

X. If you pushed fluid through your calipers before going through the process above, or if you couldn't get the lever into the $\frac{3}{8}$ " to $\frac{1}{2}$ " range; you've got a couple more steps to do, but don't sweat it, we'll get you there.

- A)** Go find that wrench you threw, apologize to the dog, and get a pan to catch the brake fluid that you may need to push back out.
- B)** Open the bleed valves on the calipers and disconnect the hydraulic brake lines. Remove the return springs/parking brake levers/rubber seals/teflon washers (have that swear jar handy).
- C)** Rotate the mounting bolt away from the direction of cable pull (clockwise for driver's side, counter-clockwise for passenger side) until the 'nut' portion starts to recess into the hole. Pound a can of spinach Popeye style and start squeezing the brake pad against the caliper piston so that the piston moves back into the caliper body. Once the piston is in as far as you can get it with the pad, slide a wood shim or a wooden paint stir stick between the pad and the rotor to hold it there.
- D)** With the wood spacer in place, turn the mounting bolts back the direction of cable pull until you can't turn them any more. A 9/16 wrench will probably be helpful as you may hit some stiff points if you're squeezing out fluid. You won't need to really crank on it, just firm pressure until it won't turn any further.
- E)** Go back up to number (4.) and proceed from there.

Alright, why did you have to do all this to have a functioning parking brake? It's because these calipers come from the end of the "fully mechanical" age of engineering. These calipers are brilliantly (diabolically?) designed to function and "self-adjust" without the aid of a computer. These videos do a great job showing the disassembly of the caliper, how all the parts function, and gives a useful visual for the following description.

https://www.youtube.com/watch?time_continue=391&v=i0fRR1kueQg&feature=emb_title

<https://www.youtube.com/watch?v=fu4bACX8NKc>

(this second video is for the later generation of Cadillac calipers, but the internals function in the same way)

The caliper consists of three main parts

1. The caliper body
2. The caliper piston
3. The parking brake spindle

The piston moves in and out of the caliper body both by brake fluid pressure and by the rotation of the parking brake spindle. The spindle remains stationary as it turns, and the piston travels forwards and backwards along a threaded section of it inside the caliper body. If the piston were attached to the spindle, it would only have so much travel (the amount the spindle is turned by the caliper mounted parking brake lever) and so it wouldn't be able to be activated by brake fluid pressure. Instead, the spindle has a ratcheting mechanism at one end that slides in and out of the piston. This permits the piston to slide out on the spindle as brake pressure is applied AND it allows the piston to move out incrementally as the brake pads wear. The presence of brake fluid pressure is what is "self-adjusting" the piston to the rotor, which is why if you bleed the brakes before adjusting the parking brake you run into problems. Essentially, with the brakes bled first, the caliper "thinks" that the pads have been worn out completely and the spindle can no longer move the piston enough to engage. The brake will still be able to stop the rotors while driving, but the parking brake will not be able to hold it. With all that said, it should be reemphasized that this is also why the parking brake should be set regularly. When the parking brake is applied with the calipers bled, the brake fluid is gradually moving the piston out on the ratchet to make up for pad wear. In the event that the parking brake is not used for stretches of time, it can be "adjusted" by pumping the parking brake pedal repeatedly. This could take 9 pumps or 20+ though, so unless you enjoy working out your left thigh, simply setting the parking brake every time you park is the way to go...