

Draft General Conversion Instructions

First let me say that this is a DIY conversion, do at your own risk. Rear disc brakes are not for everybody. Because this is a DIY conversion there will be issues that you will have to resolve and there will be some fabrication. You will be responsible for your workmanship. In the end you will be satisfied with a job well done. I am pleased with the final results of my conversion, and I hope you will also be satisfied.

Note this is assuming the mount brackets are already made and ready to be installed. Cutting out the brackets is an entirely different subject.

First get the car jacked up in the air and placed on jack stands. Confirm that the car is solid, and the jack stands are flat on the ground. We don't want the car falling and causing injury to the garage floor. ;-)

Once in the air and the wheels removed, remove the brake drums, hubs and backing plates. This is the time to deal with any wheel seal leaks. You will also remove the short pipe between "T" fitting on the axle and the right backing plate. That will not be used. The pipe between the "T" fitting and the left backing plate can be left in place or removed. The left pipe will either be modified or replaced at your option. If you decide to keep the left pipe it can be shortened and re-flared in place. Otherwise, you will be fabricating a replacement pipe.

In cleaning the axle flange of debris, it is critical that you pay close attention to the inboard side of each axle housing flange. It must be absolutely clean and free of any crud. That is the surface where the new brackets will seat against.

Note on some brackets you may have to grind a small radius so the filet on the axle housing does not hold the caliper bracket away from the housing flange.

That flat surface will locate the calipers. I used 3/8"-24 x2.5" long grade 8 bolts to attach the bracket to the axle housing flange. The bracket should be assembled so the caliper will be behind the axle housing and above the spring. Be sure to secure the bolts with lock nuts and/or Loctite. For the 240SX leave the nut off of the center of the 3 housing flange bolts.

For those using the 240SX calipers, attach the secondary 240SX bracket with 2) 10mm bolts and then the nut for the remaining 3/8 axle flange bolt.

At this point the bare hub can be reassembled on to the axle shaft. Be sure to torque the nut and use a split pin to secure the nut.

Note In preparation for the conversion, the rotors should have been modified. The pilot hole in the middle of the rotor should have been bored out to 3" and 2 holes drilled and countersunk for the set screws. The pilot hole in the rotor can be easily opened up on a lathe or in my case I rigged up a holding fixture and used a 3" hole saw in my drill press. The 3" is not a critical dimension. It just needs to be big enough to clear fillet on the hub; it does not index on the hub. The holes in the rotor are a close fit to the 1/2" wheel studs and the studs will locate the rotor. As an option I used the bare hub to locate the set screw holes. The set screws are there to keep the rotor from falling off when the wheel is removed.

Install the rotor onto the hub using the set screws to hold the rotor in place. If you opted to not use the set screws just use 2 lug nuts to hold the rotor in place. If you like, now is the time to check for axial run out. If you have excessive runout you may have to chuck up the hub in a lathe and get it straight. I have read several opinions about runout and the specs range between .004" and .010" as acceptable. Zero would be best.

Next step is to install the caliper the bolts to hold the caliper to the adapter bracket. They are 10mm-1.25 x 25 for the Sentra and 10mm-1.25 x 30 for the 240SX. I just used some bolts I had gleaned from the wrecking yard while I was there. Be sure to use grade 8 lock washers and/or Loctite. Next install the pads.

Note about the squealers on the brake pads. There is interference between the inner pad and the 240SX adapter bracket. There are 2 solutions; remove the squealer or modify the bracket. I opted to remove the squealer and preserve the integrity of the bracket.

Next step is routing the hydraulic pipes and hoses. The right side is easy. Just attach the banjo end of the brake hose to the caliper using a 10mm-1.0 x 22 banjo bolt. I just used some bolts I gleaned from the wrecking yard. Route the hose

down the back of the caliper, up over the axle tube and then around the front of the bump stop. The hose should be long enough to reach the "T" fitting on the axle tube. The hose I chose to use has a -3 JIC swivel end. The "T" is a 3/16" female bubble flare. The thread size for both is 3/8-24. To make the connection I screwed a JIC male connector into the "T". The JIC male flare should seal against the bubble flare seat. Then attach the hose and done. As a precaution you may want to put a shield around the brake hose to prevent damage due to rubbing and secure the hose with a zip tie to keep the hose away from the park brake lever.

Assembly to the left side is exactly the same except you will have to fabricate a bracket for the brake hose and pipe connection. Just locate a place for the bracket that is the same distance from axle flange as the "T" on the right side. The bracket can be welded to the axle tube or clamped to the axle tube with a 2.5" "U" bolt muffle clamp. Either is fine. For the hydraulic connection at the bracket, I used a -3 male to male JIC bulkhead fitting. The bulkhead fitting will go through a 3/8" hole in the bracket and is secured with a nut. That bracket and bulkhead fitting will provide a secure mount for the pipe and hose to connect. At this point go ahead and connect the hose. If you retain the original brake pipe, the pipe will need to be shortened to meet up to the bulkhead fitting. Cut the pipe. Then install a -3 JIC nut and sleeve and finally flare the pipe to a JIC 37 degree single flare. If you opt to make a new pipe, in addition to the JIC flare the end that goes to the "T" fitting on the right side will need to be a bubble flare. Once done attach the pipe. At this point the system may be bled.

Note The previous 2 paragraphs are what I did for the hydraulic plumbing. There are other possibilities; I just did not explore any other avenues. Also, any automotive repair shop or hydraulic shop should be able to flare the hydraulic pipe. Or a flaring tool can be loaned/rented for a nominal fee.

Note the pedal travel will be different than with well-adjusted drum brakes. For me, the travel was not an issue. If it is an issue, install some 2 psi residual pressure valves in both circuits as close to the master cylinder as possible. Those valves can

be found on eBay, Amazon, Summit Racing, as well as other sources that cater to the hot rod market.

The park brake cables will now be too long. The process I used was to back off the adjusting nut at the brake handle all the way to the end. Then, assure the cable at the left wheel end is pulled tight. Set the equalizer so that it leans a little to the right. At that point I cut the yoke for the left side off of the cable. On some cables the cable may be stuck in the yoke. You may have to smack it a few times to get it loose, but it will come out. Mount the yoke to the caliper, and then the cable through the hole in the yoke. Mark the cable with enough room for a crimp sleeve to be installed. I like to make a sleeve to go over the cable so the cable does not rub and fray where it passes through the yoke. Make the sleeve out of some spare 3/16 brake pipe with a flare on the end. The flare will go against the crimp sleeve. Crimp the sleeve and do the same to the right-side cable. Adjust the cable at the hand brake and done.

Note on the park brake cable attachment to the 240SX caliper, the hook is too shallow for my liking. For my piece of mind, I welded a piece of metal across the opening to close the loop. I then ran a 5/16" drill through the opening for the clevis pin. That way the cable yoke won't fall off.

Note the lever on the Sentra caliper will have to be modified for proper geometry. I was able to weld up a modified lever. I'm not really happy with it but it does work. Watch for clearance between the boot floor and the cable.

Note A cable cutter and crimper can be purchased at any home store, eBay, or Amazon. Some home stores may even have the crimper available for rent. If you live in a place where there is sailboat service, they may crimp the cable for nominal fee.

Now take the car for a test drive.

Notes for 77 and Later Rubber Bumper cars

77 and later rubber bumper cars have a rear anti-roll bar, and the park brake cable is entirely different.

One issue is the "T" fitting is in a different place than the CBB. For both sides you will need to fabricate a bracket for a bulkhead fitting and attach the bracket to the anti-roll bar mount on the axle tube. That's not as bad as it sounds. Then make a short jumper between the "T" fitting and the bulkhead fitting on the right side. The left will be like the CBB cars but with the bulkhead fitting attached to the anti-roll bar bracket.

The park brake cable will be a challenge. On the right side there is a straight rod. We found that a crimp sleeve will not stay in place on that rod. What I did was fashion a cable for the right side. Because of the fiber flex mount for the equalizer, I did not have to cut the left side cable. That arrangement is a bit of a mess, but it can be made to work. The other option is to change the park brake to an earlier style.