Rear Brake Calipers
Installation Instructions
For: Miata 94–00, 01–02 with standard brakes

Tools required:
- Shop manual
- Floor jack and jack stands
- Wheel chocks
- 10 & 14mm combination wrenches
- 10 & 14mm sockets
- Ratchet
- Long nose pliers
- Torque wrench
- Small drain pan.
- Small bucket of water and water soaked rag
- Synthetic brake caliper lube
  (such as Permatex part# 24110)

Suggested parts:
- Clip set for rear brake pads
  (part# 904-830)
- DOT 4 brake fluid
  (part# 220-455)
- Rear brake pads
  (part# 902-340, 903-085, or 903-638)
- Rear brake rotors
  (part# 903-140 or 903-646 - 2 required)
- Copper sealing washers for brake lines
  (part# 324-730 - 4 required)

Before you begin:
These instructions must be supplemented by a shop manual. These brake calipers differ from factory brakes in that they do not have brake piston adjustment on the back caliper. These instructions address adjusting the pad-to-rotor clearance without the factory rear adjustment. Figure A.

**Caution:** Brake fluid will damage paint. If any brake fluid should get on a painted surface, immediately rinse the area with water. Water will neutralize the fluid.
Installation Instructions

1) Place the car on level ground. Chock the front wheels. Break loose the rear lug nuts. Jack up the rear of the car until jack stand can be used and the rear wheels are off the ground. Never work on a car supported by a floor jack alone. Always use jack stands.

2) Remove the rear wheels.

3) Using a 14mm, remove the parking brake cable and brake line banjo bolt at the brake caliper. Brake fluid will leak so use a drain pan to catch it. Remove the brake caliper and caliper bracket from the car.

4) Remove the old rotors. If you are having the rotors turned, make sure to check for minimum thickness.

5) Clean the surface of the hub and install the new or turned rotor. Use one lug nut to hold it in place on the hub. Figure 5.

6) Remove the small dust cap from the end of the new brake caliper slide pin. Using a 10mm, remove the caliper slide pin. Remove the caliper bracket from the brake caliper. Figure 6.

7) Install the new brake caliper bracket onto the car. Torque the factory bolts to 38-51 ft.-lbs. Figure 7.
8) Install the new brake pad slides, brake pads and anti-rattle clips onto the bracket. Figure 8.

9) Lube the slide pin on the caliper mounting bracket. Install the caliper onto slide pin which is still attached to the caliper bracket. Hold the pads together and set the caliper down over the pads. If the caliper piston is all the way (or “fully”) retracted into the caliper there should be plenty of clearance between the pads and rotor. Figure 9.

10) To adjust the pad-to-rotor clearance; pivot the caliper up so that you can see the face of the piston. Use a set of long nose pliers to turn the piston. Turning the piston counterclockwise will bring the piston out. Clockwise will move it in. Adjust the piston until there is minimal clearance between the pads and the rotor. If you have to force the caliper down on the pads, there is not enough clearance. The hydraulic pressure will self-adjust the pad-to-rotor clearance once the brakes have been bled. You want do this initial adjustment so the first few brake pedal strokes won’t be so long. Figure 10.

11) Once you’ve adjusted pad-to-rotor clearance, lube and install the other slide pin. Torque the slide pin to 15-18 ft.-lbs. Install the dust cap on to the end of the slide pin.

12) Use new copper washers and install the brake lines onto the calipers. The brake line banjo bolt torque is 16-18 ft.-lbs.

13) Bleed the brake system using new brake fluid from a sealed container.

14) Install and adjust the parking brake cables.

15) Step on the brake pedal several times to tighten up the pad-to-rotor clearance.

This does three things:

One: It brings the pad-to-rotor clearance where it needs to be.

Two: The pedal should become firm, confirming the hydraulic system is bled.

Three: It allows you to check for leaks. If there is a problem, it is easy and safest to fix it now.
16) If the pedal is firm and there are no leaks, clean up any brake fluid with a wet rag and water. Install the wheels. Lug nut torque is 66-86 ft.-lbs. Final torque can be applied once the wheels are on the ground in the next step.

17) Lower the car onto the tires. Torque wheels.

18) Take a slow test drive on level ground to verify brake function. If the brakes feel spongy they need to be bled again.

   Check function of parking brake.

   Lastly, check for fluid leaks once again.

19) If everything checks out ok, you can move on to bedding the brakes. There are many different preferred methods to bedding brakes. Searching the internet will produce many results. The basic idea is to gradually heat the brakes up and then gradually cool them off. The hardest part is finding a road where the necessary speeds and erratic braking will not cause an accident.

   **Warning:** If at any time you feel the brakes are not working as they should, STOP! There could be a problem and you need inspect the brakes and hydraulic system.

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**Bedding the brakes**

**Caution:** Coming to a complete stop during the bedding process can cause the brake pedal to have a pulsation sometimes referred to as a “warped rotor.”

- Make 5–10, easy-to-moderate decelerations from 35 to 15 mph.
- Allow at least 10 seconds in between decelerations for cool down.
- Do not come to a complete stop during the brake bedding process. If it is unavoidable, do not hold firm pressure on the brake pedal once stopped.
- After the easy to moderate decelerations, make 5–10 moderate-to-hard decelerations from 65–25 mph
- Drive at steady state above 25 mph for several minutes to allow the brakes to cool down properly.

*The brakes are now bedded.*