

Re-Speed

1979-1985 MAZDA RX7 - Front Big Brake Kit:

Package contents:

- 2) Caliper Brackets**
- 2) 1" Outer Bearing Washer**
- 2) Bearing Spacers**
- 4) 12mm Hex Head Cap Screws**
- 4) 12mm Lock Washers**
- 4) Gold zinc plated caliper spacers**

Notice: Kit should be installed by a competent mechanic familiar with the braking system of the Mazda Rx7. Failure to install this kit correctly can cause serious braking failures.

This kit is 100% bolt-on with, mostly, normal automotive repair tools. You will not need to modify the pieces in this kit nor the stock pieces on your vehicle.

Make sure to completely read the installation manual and understand its content before beginning the conversion. This conversion should not be rushed. DO NOT start this conversion on a daily driver unless you understand the manual and have ample time to complete the entire process comfortably.

Items you will need to supply for completion of this conversion:

- 1) Lock tight.**
- 2) Turbo II Front Calipers.**
- 3) Turbo II Front Rotors.**
- 4) Turbo II Front pads.**
- 5) Brake Lines. Stock TII lines can be used without too much difficulty. (We do offer stainless lines for this kit within our online catalog.)**

Tools and Miscellaneous you will need before you begin installation:

General Hand Tools

Wheel Bearing Grease

Loctite # 609 - Bearing fitting Loctite - OR - Household Oven. See "First Things First"

Scotch Bright Pad

(2) Cotter Keys

Before you begin:

If you do not feel comfortable doing a brake job on your car you should not attempt this installation. If you do not feel confident, take the parts and this manual along with our phone number to a mechanic or local rotary shop.

First Things First:

The spindle spacer is designed and machined to have a .001" press fit onto your spindle. In one instance of over 10 spindles we found the Mazda spindle to be undersized. You will need to have a standard kitchen oven accessible as well as the possibility of the Loctite listed above in the event your spindles are undersized. This installation should not be performed when you are in a rush or need your vehicle to be drivable within 24 hours.

Step 1:

Remove the caliper – You will not reuse this part

Remove the dust cap and spindle nut – Set aside to be reused

Remove the outer wheel bearing - This is the same as the second-generation bearing and will be reused.

Remove the Hub/Rotor combination – You will not reuse these parts

Remove the (4) bolts securing the caliper bracket – Set aside the bolts to be reused. The bracket will not be reused.

Fully clean the bare spindle with brake cleaner and scotch bright or rag.

Step 2:

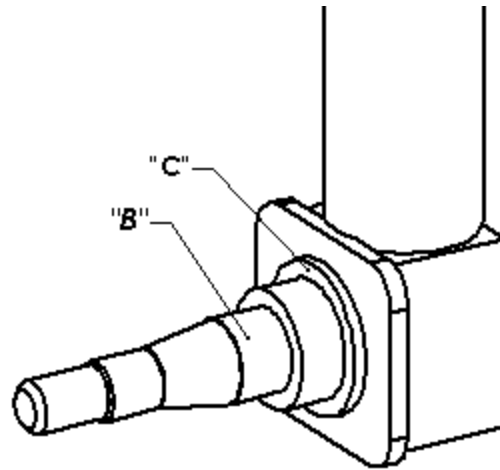
Locate the (2) spindle spacers supplied with the kit. Try to slip the spacer onto the **CLEAN** spindle. You should wiggle the spacer a bit to see if it slips onto the spindle. **Do not force the part on by hitting it with a hammer or anything else.**

(A) - If the spacer slips on to the spindle without much force you will need the Loctite listed above to secure the spindle spacer. In this case you should sparingly put the Loctite onto the spindle in the area marked "B". Shove the spindle spacer onto the spindle and make sure it seats all the way onto the spindle. **NOTE:** There should be approximately .020" gap between the spindle spacer and the spindle in the area marked "C". This may vary as much as .005" depending on the tolerance your spindle was manufactured to by Mazda. This is a design feature to make sure the spacer sits on the bearing surface rather than the backside of the adaptor.

Wipe off the excess Loctite from all spindle and spacer surfaces with a rag and let the spindle sit for 12 to 24 hours before continuing to Step 3.

(B) - If the spacer does not slip onto the spindle in the test above you have a press fit axle as designed for. Take the (2) spindle spacers and wash them with soap and water to remove any grease or oil from the manufacturing, shipping and fitting processes. Place the spindle spacers in a household oven at 300 degrees for 30 minutes. Carefully remove (1) spindle spacer from the oven and slip it onto the spindle. It may be necessary to lightly persuade the spindle spacer onto the spindle with a rubber hammer or a piece of wood if you only have a metal hammer available. **DO NOT** install the spindle spacer with metal-to-metal hits. This may damage the bearing surfaces and/or scar the parts. **NOTE:**

There should be approximately .020" gap between the spindle spacer and the spindle in the area marked "C". This may vary as much as .005" depending on the tolerance your spindle was manufactured to by Mazda. This is a design feature to make sure the spacer sits on the bearing surface rather than the backside of the adaptor.



Follow the above directions for the second spacer and then let the spindles sit for 30 minutes to 1 hour. When the parts cool onto the spindle they will not rotate nor pull off.

Step 3:

Using the factory FB bolts and lock washers secure the new caliper bracket to the spindle. The calipers can be located in front of or behind the axle centerline. In order to mount the caliper in the rearward of centerline position you will need to be using roll center blocks. This is due to clearance of the lower mounting ear will be to tight to fit with the steering arm begin spaced down and away.

Step 4:

Install the Second-generation hub and rotor assembly onto the spindle. Now would be a good time to replace worn bearings with new parts. You will also need new grease seals if you replace the inner bearing. **Follow the factory service manual or Haynes manual for correctly repacking or replacing the bearings and races.**

Once the hub and rotor and outer wheel bearing are in place slide the factory FB bearing washer onto the spindle threads. Slide the supplied 1" OD x 1/8" thick washer onto the spindle threads and then thread the factory-retaining nut onto the spindle. *Use the factory service manual or Haynes manual for correctly setting the retaining nut and cotter key on to the spindle.* **NOTE:** You should never re-use old cotter keys. Always replace them when removed.

Step 5:

Locate the Second-generation caliper to the backside of the caliper bracket using the 1/8" thick gold spacers provided in the kit. There should be (1) spacer per caliper mounting ear. Secure the caliper mounting ears to the caliper bracket using the supplied 12mm x 30mm bolts and lock washers.

Step 6:

Install the brake lines and bleed the brake system as per the factory service manual or Haynes manual. It is always a good idea to double check all bolts and nuts after a few miles of driving after you complete an installation like this one. You should also re-visit the nuts and bolts after a few days and then keep an eye on them continuously.

