An Impressive Performance

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It is the middle of August 2002, 85 degrees outside, making it nearly 100 on the tarmac. I'm approaching corner 8 at Mosport, wide open in third gear and I've had the tachometer buried for about three seconds as I enter the braking zone. It's a 90 degree right hander with a through speed close to 80 mph and the thing is I'm going much faster than 100 mph. The guy behind me in his non-turbo, old school 911, is really on my tail. I am nearing the end of my 20 minute lapping session and the brakes are pretty hot. I nail the pedal hoping to show up the 911, as he is gradually getting larger in the rear view mirror, and I am left with terrible braking, a low pedal, weak bite and certainly not Porsche class. As a result, I am left to chase the 911 for my remaining few minutes and hope to best him during the corners, as opposed to before them. The braided lines, with the Hawk pads and synthetic brake fluid, even the cooling ducts could not do it, there is simply too much car for the brakes.

Enter the big brake kit

First question: How do we make a 1st Gen stop quickly? Answer: Bigger rotors and a multiple piston calliper. Where to look for the parts was a no-brainer, straight to the Turbo II. So we steal the callipers and the 10.9 inch rotors and spend almost a year testing and doing R&D to make it all go together safely. The end result is perfect. No pedal going away, no weak bite or long stop distances. A rock hard pedal and quick stops over and over again. The balance is beautiful. Not too much braking for the car, as a matter of fact it is spectacular. If Mazda had offered a brake upgrade for the 1st Gen, this would have been it. On the track there is simply no fade. Go ahead, beat up the car, brake late, there is just no fade. The brakes perform effortlessly because the mass they are now decelerating is so much less then they were initially intended to control. The combination of stainless steel braided lines, high quality pads and clean brake fluid has me leaving seatbelt bruises on unsuspecting passengers and diving in under braking on z06s Vettes and s2000s.

This kit installs in a few hours and can easily be done in the driveway. If you can do a brake job you can do this conversion. All the consumable parts are factory parts and are readily available from the dealer or your choice of any aftermarket supplier. The kit was designed to meet several needs at once, if you use the five-bolt configuration, you can abandon the 4x110 bolt pattern and finally get some nice wheels. In the event you have a GSL-SE with nice wheels already, you can use the kit in four-bolt trim and retain your 4x114.3 bolt pattern. Your wheel position in reference to the car and the suspension is not corrupted, nor are specialty offset wheels required.

At the end of the day you are left with a little rotary rocket that comes down from top speed as quickly as it got there.

Step-by-Step Instructions:

- Securely place car front on jack stands.
- Remove wheels, loosen brake line on callipers, and remove brake line to strut housings clip.
- Remove 1st Gen calliper, rotor, wheel bearings and calliper bracket from spindle.
- With bare spindle visible, remove all old grease and dirt and clean entire spindle with emery cloth, tip to base to assure all dirt and rust is removed. Clean using brake cleaner and apply light coating of grease once completed.
- Take spindle adapter and lightly coat inside with grease. With the supplied driving tool and a hammer, tap the adapter all the way onto the base of the spindle. Be sure the adapter seats are all the way down onto the base of the spindle.

With the adapter now in place, take the supplied calliper bracket and install:

- For five-bolt set-ups: Spacers on bracket should be facing toward you and away from the vehicle.
- For four-bolt set-ups: Spacers on bracket should be facing vehicle frame and away from you. NOTE: Bracket will relocate calliper on forward side of brake rotor.

- With bracket in place, use factory calliper bracket hardware to secure bracket in place, apply blue Loctite to bolts and tighten to factory recommended torque specification.
- With bracket and adapter now in place, liberally grease spindle and place fully assembled 2nd Gen four-bolt or five-bolt hub assembly with freshly grease packed bearings onto the spindle and adapter.
- Reassemble using factory spindle nut, nut cover and bearing spacer and cotter pins. Using a socket and ratchet, tighten wheel bearing and hub assembly until hub cannot spin, then loosen again. Repeat this procedure several times to assure proper seating of wheel bearing. Once properly seated tight to factory recommended torque specification and reassemble. Make sure to always use new cotter pins and spin hub to assure correct assembly.
- Place factory Turbo II brake rotor on hub. For cars running four-bolt set-ups it is necessary to have the turbo II brake rotor re-drilled to 4x114.3; any machine shop can do so for little expense.
- With rotor in place, install stainless steel brake lines (highly recommended) or slip supplied copper washers on over 1st Gen brake line threads, three washers per line are required. Thread loose calliper onto brake line and snug with wrench, do not attempt to tighten at this time.
- Install calliper on bracket.

For five-bolt set-ups

Place calliper on bracket on front side of rotor, use supplied spacers to go between the calliper and the calliper bracket, two spacers per bolt, which will center the rotor in the calliper. Using factory hardware, tighten calliper bolts to factory specifications. Depress calliper pistons and install new brake pads.

For four-bolt set-ups

Place calliper on bracket on front side of rotor, and using factory hardware secure in place. Tighten to factory specifications, depress calliper pistons and install new brake pads.

- Tighten brake lines on callipers; bleed entire system with new brake fluid.
- Place supplied wheel spacer on rotor face, one per side, install wheels and spin to see the assembly rotating freely.
- Lower vehicle onto ground. At a very low speed, no more than 60 mph (100 kph) drive vehicle several miles swerving steering wheel sharply left to right in a "tire warming motion."
- Return the vehicle to the air on front jack stands, remove wheels, remove dust caps, cotter pins and spindle nut covers, RE-TORQUE spindle nuts, then reassemble. This must be done to seat adapters; otherwise spindle nuts will be loose. **RX**