RACE-DEVELOPED COMPONENT

Turner Motorsport Inc. 207 Elm Street, Amesbury, MA 01913
978-388-7769 / www.turnermotorsport.com

DBM 1/28/05

TMS E46 Carbon Brake Backing Plates

PART #TBR4663226

The TMS carbon brake backing plates are made of pure carbon and high temperature resin. Our unique design specifically for the E46 is optimized for 3" hose and allows the air to flow directly to the rotor with no impedance and weigh a considerable amount less compared to competing products. When flow tested compared to a competitor's product, the TMS ducts flowed ***twice*** as much. This greatly reduces the chance of brake fade, boiling the brake fluid, and wear and tear on your brake components. Installation is easy, as it does not require removal of the wheel bearing. We do this by making the backing plate in two parts. The main backing plate and a block off plate that bolt together. Most companies just have a big slot so you can slide the backing plate on, but then it just lets air flow right out of it. We block off the hole to maximizing brake cooling airflow to the center of the rotor.

Parts list for kit:

2 – Carbon backing plates and block off plates
2 – Spindle Spacers
4 – M5 button head hex bolt, washers, and nuts
2 – M6 Studs
6 – M6 blots
4 – M6 Large washers
2 – M6 washers

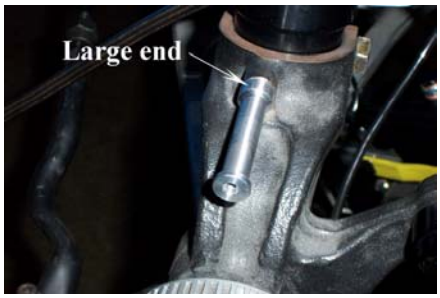
Directions:

1. If you own an E46 Non-M3 or Z4 both backing plates will have to be slightly modified. See Step 5A on what modifications need to be made

2. Properly lift and support the front end of the car, and remove the front wheels

3. If your car still has the original metal dust shields:
   - Remove caliper, caliper bracket and rotor. Hang Caliper by something so the brake lines are not damaged. Tip: use a piece of wire tied to the spring to hang the caliper.
   - Remove ABS sensor from spindle
   - Remove the 3 bolts that hold the dust shield on.
   - The dust shields will not come off easily unless you remove the wheel bearing. Or you can cut the dust shield off with a pair of tin snips but be careful of the ABS ring. (We definitely suggest just cutting them off; it saves time and the possibility of damaging the wheel bearing.)

4. Screw the M6 stud into the top hole of the spindle till it bottoms. Screw the Spindle spacer on to the stud with the large flange end toward the spindle. Snug the spacer tight with a rag and pliers (so not to damage spacer).



5. Remove the block off shield from the backing plate. Slide the correct side backing plate on to the spindle so the inlet opening faces to the inside and front of the car.
   Note: If you have a Non M3 or Z4 See Step 5A on bottom of page.
   - Bolt the block off plate back on to the backing plate with the supplied M5 hardware, insert the button head hex bolt from the spindle side so that the nut will go on from the bearing side and tighten.
   - Put one small drop of thread locker on each of the M6 bolts.
   - Line up the bolt holes in backing plate with bolt holes in spindle. Use one M6 bolt with small washer in the bolt hole closest to the tie rod-end. Place the other two M6 bolts with large washers in the other two mounting holes and tighten.
   - Install ABS sensor.

6. In this step we are going to check rotor to backing plate clearance. Install rotor onto hub with the rotor set screw and at lest 3 wheel bolts and check the clearance between rotor and backing plate. There should be 2mm gap or more. Tip: a $0.05 Nickel is 1.9mm thick so if can slip a Nickel between the rotor and the backing plate you are all set, if not you should sand the lip down until till the Nickel slips in. Why are you doing this? The small gap will spill air onto the inner rotor face and aid in cooling.

7. Reassemble rotor and caliper. Torque caliper bolts to: 110 Nm (81 ftlb)

Step 5A. E46 non-M3's and all Z4's

The caliper on the non-m3's and Z4 are clocked at a different angle than the M3, so you need to trim a small amount of material from the backing plate. If you do not do this, the caliper bracket will push the backing plate into the rotor. You will need to make it so the caliper bracket slips between the backing plate and spindle. Tip: A sanding disc on a die grinder works fast and easy.