

Last Updated: 05 April 2020

DIY Porsche 996 BBK for e46 M3 Conversion Thread:

<https://nam3forum.com/forums/forum/main-forum/e46-2001-2006/3153-porsche-brembo-996-bbk-conversion>

How to Calculate Brake Bias Thread:

<https://nam3forum.com/forums/forum/main-forum/e46-2001-2006/3074-lost-m3f-post-how-to-calculate-brake-bias>

Brembo Caliper Rebuild DIY:

<https://www.youtube.com/watch?v=sh1QMKurU8g>

https://www.youtube.com/watch?v=fyNn_C63eMc&list=PLNKrPMJBU7WgmPIMG0q9dA82nzIFMuUTM&index=5&t=0s

Calipers used for this conversion are calipers from:

- 1998-2005 Porsche 996 (C2/C4, non-turbo)
- 1999-2004 Porsche 986 Boxster S
- 2005-2012 Porsche 987 Cayman S
- All these calipers are made from the same Brembo casting.

Front Calipers:

The Porsche part numbers for this conversion are:

- Front Caliper, Left: 996-351-425 (driver side)
- Front Caliper, Right: 996-351-426 (passenger side)
- Piston 1 Size: 36mm
 - Piston Seal: Brembo Part # BRE-10.55955.56
 - Dust Boot: Porsche Part # 951-351-917-00 / BRE-20.4872.44
- Piston 2 Size: 40mm
 - Piston Seal: Brembo Part # BRE-10.55955.58
 - Dust Boot: Porsche Part # 951-351-917-01 / BRE-20.4872.46
- Front Calipers need to be machined 5.5mm in order to align correctly with the bracket and create full coverage over the front rotors
 - Rally Road
54636 Pelican Lane
Shelby Township MI 48315

Rear Calipers:

The Porsche caliper part numbers for this conversion are:

- Rear Caliper, Left: 996-352-421 (driver side)
- Rear Caliper, Right: 996-352-422 (passenger side)
- Piston 1 Size: 28mm
 - Piston Seal: Brembo Part # BRE-10.55955.52
 - Dust Boot: Porsche Part # 951-352-917-00 / BRE-20.4872.40
- Piston 2 Size: 30mm
 - Piston Seal: Brembo Part # BRE-10.55955.53
 - Dust Boot: Porsche Part # 951-352-917-01 / BRE-20.4872.41

Rallyroad.net Front Brackets:

- <https://rallyroad.net/collections/e46brakes/products/e46m3frontbbkadapterbrackets>
- We now offer brackets for the E46 M3 so you can install the popular Porsche Brembo 996/Boxster-S caliper upgrade. CNC Machined Brackets are designed to fit a Porsche 996 Brembo front caliper to the E46 M3 front spindle
- There is only one rotor option for this bracket, the E46 M3 CSL 345mm fronts. This requires 5.5mm to be machined from the mounting boss of the caliper. We offer this service on your calipers for \$95 plus return shipping.
- This kit with 345mm diameter rotor is for 18 inch diameter or larger wheels only. As stated before, the only modification required is to machine 5.5mm of material from the mounting boss of the calipers. Once the caliper is machined, the E46 M3 CSL 345x28mm floating rotor is a bolt on setup for this bracket.
- Caliper to Bracket: 35 ft-lb

Rallyroad.net Rear Brackets:

- <https://rallyroad.net/collections/e46brakes/products/e46m3rearporschebrembobrackets>
- Upgrade your single piston rear calipers to a 4-piston caliper from the Porsche 996 or Boxster S.
- CNC Machined Brackets are designed to fit a Porsche 996 Brembo rear caliper to the E46 M3 rear mounts. The rotor used is your standard E46 M3 328x20mm rear rotor. You may use the standard rear rotors or two piece rear floating motorsport rotors (they are the same dimensions).
- Note: You may use the Boxster 2.7 liter FRONT brake pads in this rear caliper. These pads extend down another 5mm and eliminate the small rust ring that can form. When searching for these pads, just use the year 2000 Boxster 2.7 liter as your search vehicle.

Rallyroad.net Bracket Torque Specs:

- Adapter bracket to knuckle:
 - Front: 50 ft-lb
 - Rear: 45 ft-lb
- Front caliper to adapter bracket (7/16-20 nuts): 35ft-lb max
- Rear caliper to adapter bracket (M12 socket head cap screws): 45-50 ft-lb

p0lar Rear Brackets:

- <http://m3forum.net/m3forum/showthread.php?t=420496>
- E46 M3 rear rotors (ZCP/CSL/Euro/Standard 328mm x 20mm)
- Porsche Boxster/Cayman S rear 4-Piston calipers
- NO RUST RING! NO INTERFERENCE WITH UPPER WISHBONE MOUNTING BOLT!
- Requires FMSI D737 pad

OE BMW ZCP Rotors:

- Front Left: BMW Part #34-11-2-282-445
- Front Right: BMW Part #34-11-2-282-446
- Rear Left: BMW Part #34-21-2-282-303
- Rear Right: BMW Part #34-21-2-282-304
- Front Rotor Screw: BMW Part #34-11-1-123-072
- Rear Rotor Screw: BMW Part #34-21-1-161-806

Stainless Steel Brake Lines:

- Front:
connector A: 10mm, 15 degree banjo
connector B: 10mm, female with 1.0 thread pitch
length: 20.5inches
- Rear:
connector A: 10mm, banjo
connector B: 10mm, female with 1.0 thread pitch
length: 20.5inches
- Front Lines: <https://rallyroad.net/collections/e46brakes/products/e46bigbrakekitfrontlines>
- Rear Lines: <https://rallyroad.net/collections/e46brakes/products/e46bbkstainlessrearbrakelines>

Pads and Hardware:

- Part numbers for Boxster S/Cayman S front Textar pads: 996-352-949-03-M3 (D917)
- Part numbers for Boxster/Cayman "front" Textar pads: 986-351-939-15-M3 (D737, for use with p0lar brakets OR Rallyroad!)
 - Post #61 - <http://www.m3forum.net/m3forum/showthread.php?t=515972&page=7>
 - 31 Oct 2018: These are the pads I used with the RR brackets. I ordered everything for my car within the last couple months. So mine would be the most updated if there was an update.
The EUR737 is the Boxster front brake pad set that I used in the rear. Fits perfectly with no rust ring. I even have shims installed on inside and outside of every caliper. Zero fitment issues and feels amazing.
- Part numbers for Boxster S/Cayman S front pad hardware kit: 996-351-959-01
 - Bolt, expanding spring, and securing clip
- Part numbers for Boxster S/Cayman S rear pad hardware kit: 996-352-959-01
 - Bolt, expanding spring, and securing clip
- Front Caliper Connecting Line (Left): 996-351-961-00
- Front Caliper Connecting Line (Right): 996-351-962-00
- Rear Caliper Connecting Line (Left): 996-352-961-00
- Rear Caliper Connecting Line (Right): 996-352-962-00
- Bleeder Screw: BRE-02.2812.13
- Bleeder Screw Cap: BRE-05.1502.20
- (4) Front Caliper Damper Plates: 996-351-088-02
- (4) Rear Caliper Damper Plate (28mm): 996-352-086-02
- (4) Rear Caliper Damper Plate (30mm): 996-352-086-00
- Brake Piston Grease: 000-043-117-00

Wear Sensors:

- (1) Front Wear Sensor: 996-612-365-00
- (1) Rear Wear Sensor: 986-612-365-00
- There is only one sensor for front and one for rear on the e46 M3, where Porsche has sensors on all four corners.
- You will need to cut and reuse the connector from the BMW sensor and crimp/solder to the new Porsche ones. Doesn't matter which wire goes to which. Sensor just looks for an open circuit.

Seal Kit Options:

- Front Seal Kit: <https://www.racingbrake.com/Boots-and-Seals-Kit-Porsche-Boxster-Cayman-9-p/bp-404bs.htm>
- Rear Seal Kit: <https://www.racingbrake.com/Boots-and-Seals-Kit-Porsche-911-C2-996-Rear-Cap/bp-403bs.htm>
- <https://www.ohioperformancesolutions.com/product-page/28mm-30mm-36mm-40mm-stoptech-brembo-front-brake-caliper-rebuild-kits-qty-2>
- https://www.hrpworld.com/shop-by-manufacturer/brembo-racing-high-performance-brake-systems.html?p=4&product_list_limit=all

Caliper Assembly / Installation Information:

- You have to switch the rear crossover/connector lines around, but you also have to swap from one caliper to the other in order to do so as they are Asymmetrical (as you should be able to see in the photos:
 - Just to reiterate what you said to make sure I follow:
 - *Remove the rear left and rear right crossover connector from the calipers.
 - *Flip both connectors around and then install it to the opposite side of where they came from.
- Exactly, plus it'll be obvious when you do it, it can only go one way and still follow the shape of the caliper.
 - You'll know you have it wrong if the line is sticking up above the caliper end. To be clear, that means it is possible to install them in 2 different ways besides their natural position. And when I say wrong, it's really about looks. I don't see them being installed the "wrong way" as stopping them from working or them causing an issue necessarily, though I obviously am not gonna try it.
- Rotor face should be coming in contact with the smaller piston first.