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F8X M3/M4 Big Brake Kit on E46 M3

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metrofit.georgia
Junior Member

Join Date: Apr 2020
Posts: 12

F8X M3/M4 Big Brake Kit on E46 M3 #1
04-18-2020, 07:38 AM

Hello forum members and greetings from sunny Georgia!

We would like to share our experience and provide a solution for our beloved E46 M3 brakes conversion.

The Standard brakes on the M3, especially US spec, non-ZCP models are quite small, and start to fade out even after small abuses. Same goes for ZCP and all Euro spec cars. They just can not handle the weight if a car is driven a little harder than spirited. The Internet suggests to install Euro spec, 345mm cross drilled rotors and get them working with 4 or 6 piston calipers of other cars. The idea may sound appealing at first, but you should keep in mind, if a leverage is not increased, the actual stopping power will never be what you have originally hoped for.

The project began when we searched for a relatively lower price Big Brake Kit solution for our M3. After receiving a lot of information about people installing F8X M3/M4 brakes on their E46 M3s, and finding out pre-owned M3/M4 brake setup can easily be found for sub \$1500 including rotors, we decided to have a try.

We went ahead and bought a set of used F8X M2/M3/M4 brakes. This included:

- 2 X Front calipers
- 2 X Rear calipers
- 2 X Front rotors 380x30 mm
- 2 X Rear rotors 370x28 mm

Front brakes installation turned out to be pretty straight forward. The calipers bolt right on and no adapter is needed. The only point which needs to be taken care of is to perfectly align the brake rotors inside the caliper. There are 2 basic ways to do this: first one is to use 3mm spacers between the rotor and the hub. The second way, which we ended up going, is to shave off 3mm off the caliper mounting points.

The rears are a little more tricky. The brake assembly had to be 3D modeled and a special adapter had to be made. We used 7075-T6 Aluminum, the strength of which is well enough for the job. To attach the rear calipers, a piece of metal had to be machined off the calipers to clear the mounting spots of the hub. This does not require any exact measurements or special tools and can be done even with an angle grinder as the job is quite easy. Note that the machined out part is nowhere near the internals of the caliper. Standard E46 M3 E brake shoes fit inside the M4 rear rotors perfectly, therefore no need of modifying anything there.

We have not replaced the standard E46 M3 brake lines with armored ones yet, but we are looking forward to doing so in the nearest future. Standard E46 M3 lines work perfectly well and they can be replaced either with E46 or M3/M4 brake lines. With our experience we would recommend buying E46 ones, as M3/M4 brake lines are longer than necessary, but both options will work perfectly.

After installing and bleeding the brakes we went for a test drive. Straight forward the stopping power was immense. The whole car and the driving experience felt completely different as the brakes are so confidence inspiring. The pedal feels way more linear and progressive compared to standard floating calipers. Everything turned out to work perfectly well together. Along with driving experience, the car now looks totally different with the enormous brakes filling the 19" wheels.

The whole BBK installation job is pretty straight forward once you possess the tools and components needed. The whole process can easily be done on a driveway. The hardest part to acquire was the rear caliper adapter, which we ended up 3D modeling. In case you are interested in buying them please feel free to contact us via email. We can make them individually, therefore no group buys are necessary.

Most photos of the process will be attached to the post. We will also be posting the conversion process to other forums.

Thank you for the attention and please feel free to ask any questions below.

Contact: metrofit.georgia@gmail.com



Last edited by [metrofit.georgia](#); 04-18-2020, 09:54 AM.

Tags: [bbkretrofit](#), [brembo calipers](#), [brembo retrofit](#), [cheap bbk](#), [e46 bbk](#), [e46 m3](#), [m3 bbk](#), [m4 bbk](#), [m4 brakes](#)

1 like

Aandriotis
Junior Member

Join Date: Apr 2020
Posts: 1

04-18-2020, 08:11 AM #2

nice write up!!
So rotors are also from F8x m3/m4 right ?
and do you know if this kit will clear 18" wheels like Apex Arc-8 ?

metrofit.georgia
Junior Member

Join Date: Apr 2020
Posts: 12

04-18-2020, 09:43 AM #3

Originally posted by [Aandriotis](#)
nice write up!!
So rotors are also from F8x m3/m4 right ?
and do you know if this kit will clear 18" wheels like Apex Arc-8 ?

Thanks for your response! We hope the post will be helpful.

Yes, the rotors also come from F8X M2/M3/M4. They are 380mm up front and 370mm on the rear, which is a massive step up compared to standard E46 rotors. As expected, they are quite limited in wheel sizes. I can not tell exactly about the standard E46 M3 18" wheels, but I am almost 100% positive that Apex ARC 8 wheels in 18" size will clear the brakes just fine, because there are numerous photos on the Internet of M3/M4s on those wheels.

Forgot to mention rotors in the post. I will edit it.

Last edited by [metrofit.georgia](#); 04-18-2020, 09:45 AM.

josh
Junior Member

Join Date: Mar 2020
Posts: 1

04-18-2020, 09:53 AM #4

Wow! Any way you would produce those brackets for sale? I've always thought it was a shame that even with bigger calipers we never really had a way to upgrade the rotor size! I'm not too smart on the brakes aspect of our cars but would rotor size in any way mess with the brake bias? Amazing work guys this is awesome information!!!

Edit: I just saw where you mention how to buy the brackets. 🙄

Last edited by [josh](#); 04-18-2020, 09:57 AM.

jahaddow
Junior Member

Join Date: Apr 2020
Posts: 1

04-18-2020, 03:54 PM #5

Blatant copy of my original thread in M3forum, word for word in some parts. Even copied my bracket design, nice 🙄

Originally posted by [metrofit.georgia](#)
100% positive that Apex ARC 8 wheels in 18" size will clear the brakes just fine

Incorrect, they absolutely won't clear the front calipers unless some further grinding modifications are done to the outside of the caliper. Which will then need repainting.

metrofit.georgia
Junior Member

Join Date: Apr 2020
Posts: 12

04-19-2020, 04:14 AM #6

Originally posted by [jahaddow](#)
Blatant copy of my original thread in M3forum, word for word in some parts. Even copied my bracket design, nice 🙄

Incorrect, they absolutely won't clear the front calipers unless some further grinding modifications are done to the outside of the caliper. Which will then need repainting.

Hello!

Thank you for the comment. We would like to address your concerns about similarities of the posts. As mentioned, we did some research about process. There are numerous posts on different forums about this retrofit and they are all similar to each other. Our post was made based on our experience and the information on the Internet. We hope you understand this process can not be much different for the people who try it independently from each other. The end result will always be the same.

As for the adapters, again there are numerous examples of them and they all look similar to each other just like ours. We have never intended to reinvent a wheel, we have gathered the information which is available on the Internet. Indeed the adapters look similar, but they are made completely independently from one another.

We hope this makes everything clear for you as we have never intended to upset anybody.

Best wishes!

mikeetastic
Junior Member

Join Date: Sep 2020
Posts: 1

10-19-2020, 09:56 AM #7

Where do you guys source the rear caliper adaptors bracket?