**Replace Rear Wheel Carrier Bushings**

The BMW E46 rear suspension consists of the following components:

* Rear subframe - The differential is bolted to the subframe and the upper and lower control arms are anchored to it.
* Trailing arm on each side - The front of the arm is bolted to the body using a bracket. The rear wheel bearing is pressed into the rear of the trailing arm.
* Upper control arm on each side - The inner end of the upper control arm is bolted to the rear subframe. The outer end is attached to the trailing arm above the wheel bearing opening. A modified bushing (referred to as the rear ball joint) is used at the control arm-to trailing arm attachment point.
* Lower control arm on each side - The inner end of the lower control arm is bolted to the rear subframe. The outer end is attached to the trailing arm below the wheel bearing opening using an eccentric bolt through a rubber bushing. The eccentric bolt is used to set rear wheel camber.
* The stabilizer bar is anchored at the rear subframe and attached via stabilizer links to the rear upper control arms.
* Coil springs and gas-filled shock-absorbers are mounted separately.

Inspect the rubber bushings attaching the trailing arms to the body, the control arms to the rear subframe and the trailing arms, and the subframe to the body and to the differential. These bushings should be solid and lack dry rot. Replace a bushing if it shows signs of failure. You can use a large screwdriver or pry bar to try to move components against the rubber bushing and watch closely for signs of rubber deterioration and looseness.

In this tech article I will describe how to replace the outer bushing of the lower rear control arm. Remember that an eccentric bolt is used as the fastener at this location and the position of the eccentric determines the rear wheel camber. Be sure to mark the position of the eccentrics (washer on bolt head as well as washer at the nut end) before disassembling, and reassemble using your marks in order to achieve the correct nominal camber. Finish up by having the vehicle professionally aligned.

Keep in mind that when your car was serviced before, parts may have been replaced with different size fasteners used in the replacement. The sizes of the nuts and bolts we give may be different from what you have, so be prepared with different size sockets and wrenches.

Protect your eyes, hands and body from fluids, dust and debris while working on your vehicle. If you are working with the electrical system, disconnect the battery before beginning. Always catch fluids in appropriate containers and properly dispose of any fluid waste. Recycle parts, packaging and fluids when possible. Do not work on your vehicle if you feel the task is beyond your ability.

Vehicle models change and evolve as they grow older, so the vehicle shown in our illustrations may vary slightly from yours. If something seems different, let us know and share your info to help other users. Do you have questions or want to add to the article? Leave a comment below. When leaving a comment, please leave your vehicle information.

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| [This photo shows the rear bushing (green arrow) connecting the rear lower control arm to the rear wheel bearing carrier.](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic01.jpg)  **Figure 1** | This photo shows the rear bushing (green arrow) connecting the rear lower control arm to the rear wheel bearing carrier. Raise and support the rear of the vehicle on jack stands.  For more information please refer to our Pelican Parts Technical Article on Jacking Up Your BMW.  Remove the rear wheel from the side of the vehicle you are replacing the bushing on.  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic01.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic01.jpg) |
| [Mark the location of the eccentric washers before removing the bushing fastener (green arrows): this will help when reinstalling.](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic02.jpg)  **Figure 2** | Mark the location of the eccentric washers before removing the bushing fastener (green arrows): this will help when reinstalling.  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic02.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic02.jpg) |
| [Remove the rear bushing 18mm fastener.](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic03.jpg)  **Figure 3** | Remove the rear bushing 18mm fastener. Loosen the nut and remove; then the remove bolt.  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic03.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic03.jpg) |
| [Next, clean out the area surrounding the rear ball joint.](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic04.jpg)  **Figure 4** | Next, clean out the area surrounding the rear ball joint. Then measure the length on the bushing that protrudes (green arrow) out of the rear wheel bearing carrier.  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic04.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic04.jpg) |
| [Once bushing has been removed, clean the mounting area of rust and debris (green arrow).](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic05.jpg)  **Figure 5** | Next you have to remove the bushing out of the wheel bearing carrier. You can do this two ways: one is to use a press tool, the other is to knock it out with a soft-faced hammer. I usually give the bushing a few good solid whacks and it pops out. However, depending on your area, it may require a press.  Once bushing has been removed, clean the mounting area of rust and debris (green arrow).  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic05.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic05.jpg) |
| [Assemble the press tool and the new bushing to install the bushing into the wheel bearing carrier.](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic06.jpg)  **Figure 6** | Assemble the press tool and the new bushing to install the bushing into the wheel bearing carrier. Then install the bushing into the wheel bearing carrier following the directions supplied with the tool. Check that the bushing is at same installation depth as the one you removed, as per your earlier measurement.  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic06.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic06.jpg) |
| [Once the bushing is pressed in.](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_small/pic07.jpg)  **Figure 7** | Once the bushing is pressed in. Install the eccentric washers in the same position as before and tighten the fastener.  Reassemble the remaining items and have the vehicle professionally aligned.  [Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_med/pic07.jpg) | [Extra-Large Image](https://cdn4.pelicanparts.com/BMW/techarticles/BMW-3-Series-E46/49-SUSPEN-How_to_Replace_Your_Rear_Wheel_Carrier_Bushing/images_large/pic07.jpg) |