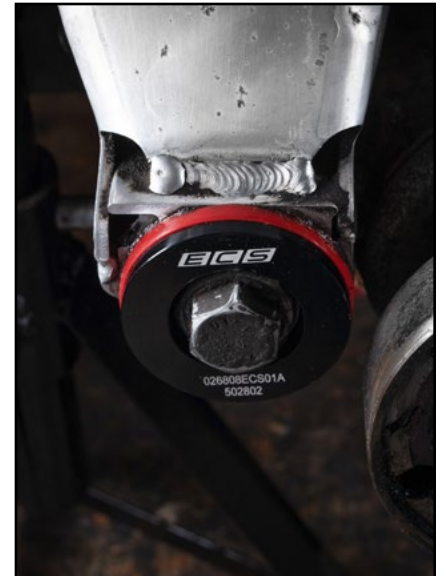


BMW E39 Poly Rear Differential Bushing Set Installation Instructions - [ES4030646](#)



Thank you for purchasing your new BMW E39 Poly Rear Differential Bushing Set, we appreciate your business!



These installation instructions have been broken up into several sections:

- 1) Removing the Rear Subframe
- 2) Installing the New Poly Bushings
- 3) Reassembly

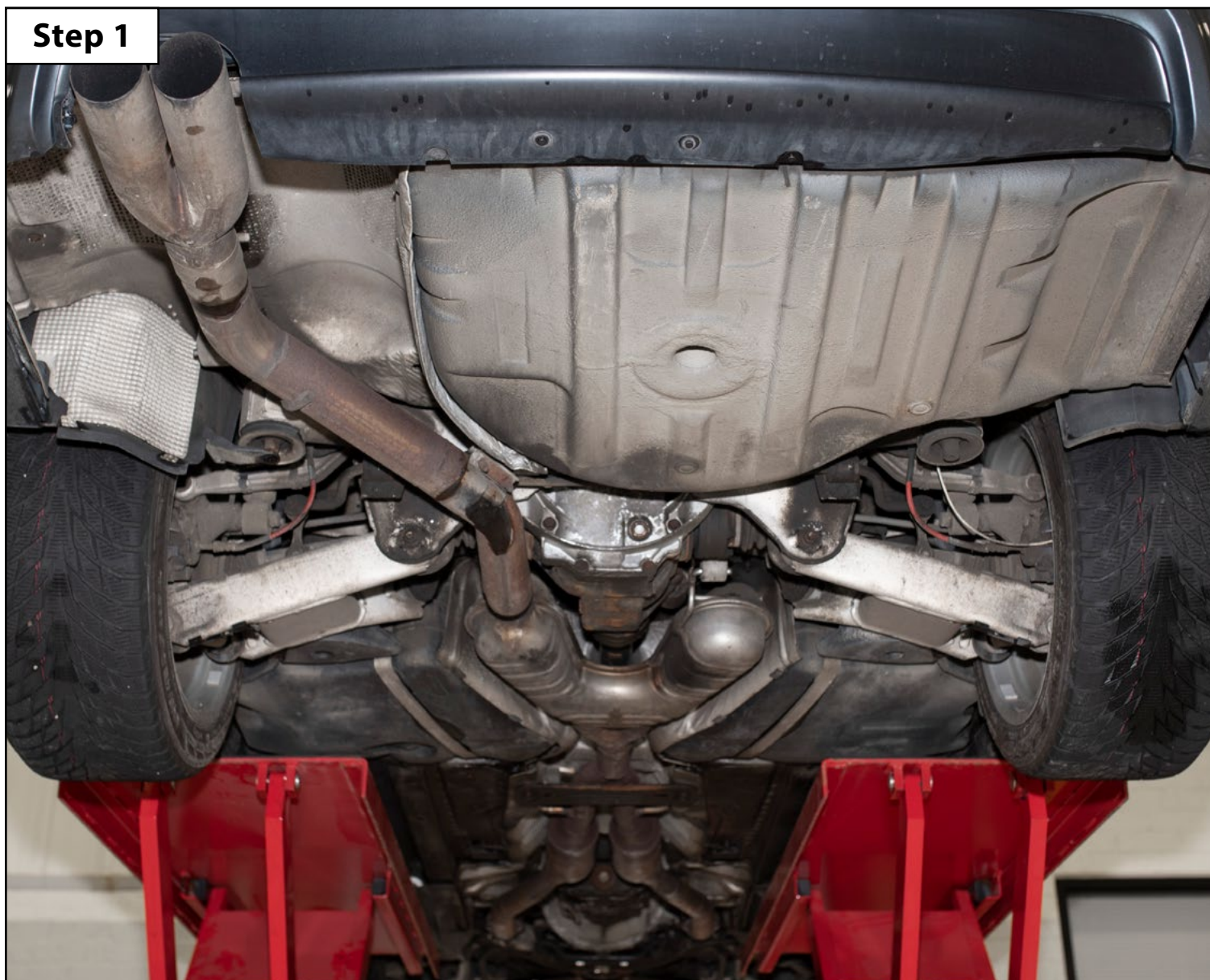
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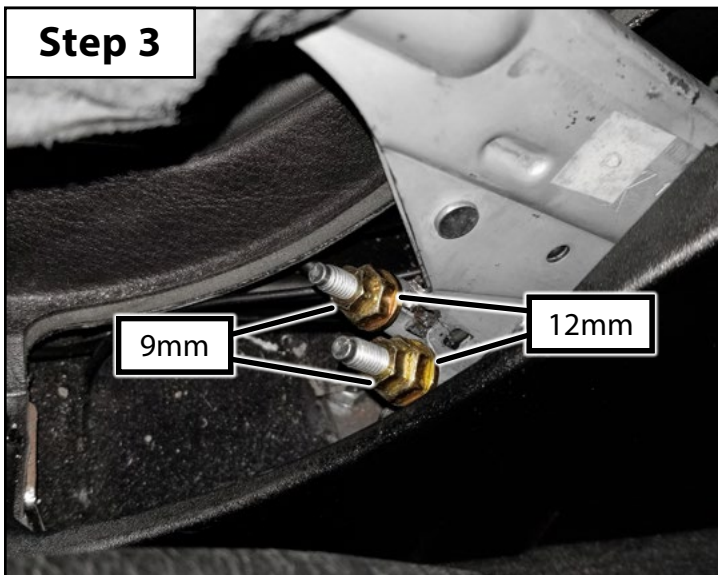
Section 1: Removing the Rear Subframe

- Step 1**
- Remove the rear wheels.
 - Remove the exhaust system and the heat shields around the fuel tank.
 - Remove all applicable underbelly panels (including both rear fender liners).



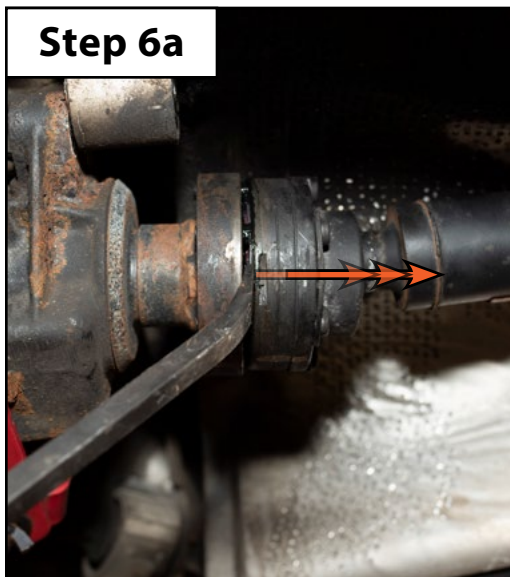
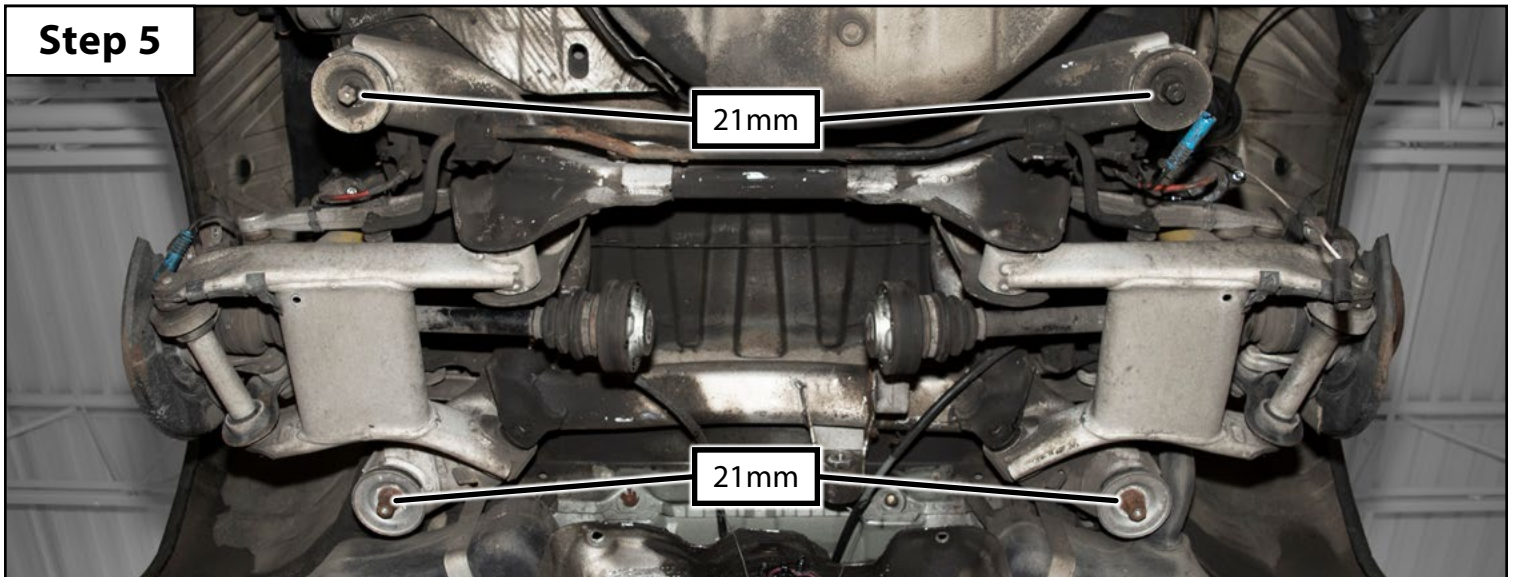
Section 1: Removing the Rear Subframe

- Step 2**
- Mark the driveshaft CV joint and the input yoke on the differential with paint so they can be easily realigned during reassembly.
 - Remove the 16mm nuts from the driveshaft CV joint (highlighted in **GREEN** in the **Step 2 photo below**).
 - The vehicle shown has a CV joint on the end of the driveshaft. If your vehicle has a universal joint at this location the fasteners will be different, but this connection must still be released.
- Step 3**
- Disconnect the parking brake cables from the lever inside the vehicle (**Step 3 photo below**).
- Step 4**
- Carefully guide each of the parking brake cables out of the body (**Step 4 photo below**).



Section 1: Removing the Rear Subframe

- Step 5**
- Remove the bolts which secure the shocks to the wheel carriers.
 - Disconnect the rear vehicle level sensor (small connector on the RH side of the subframe).
 - Disconnect the rear brake pad sensor.
 - Remove and safely support the rear brake calipers.
 - Disconnect all remaining wiring harness connections between the subframe and the chassis.
 - Support the subframe from below.
 - Remove the 21mm subframe bolts.
 - **Continue to Step 6a & 6b BEFORE removing the subframe.**
- Step 6a**
- Carefully pry the CV joint on the end of the driveshaft out of the rear diff as you begin to lower the subframe.
- Step 6b**
- Carefully lower the subframe and remove it from the vehicle.



Section 2: Installing the New Poly Bushings

- Step 1**
- Safely support the rear subframe.
 - Choose one of the following:
 1. Unbolt the CV axles and remove the rear differential from the subframe.
 2. Leave the CV axles attached, unbolt the rear differential from the subframe and carefully lower it downward to gain the space needed for removing the stock bushings. If you choose this option you need to be very careful to not damage the differential or overextend the CV axles.

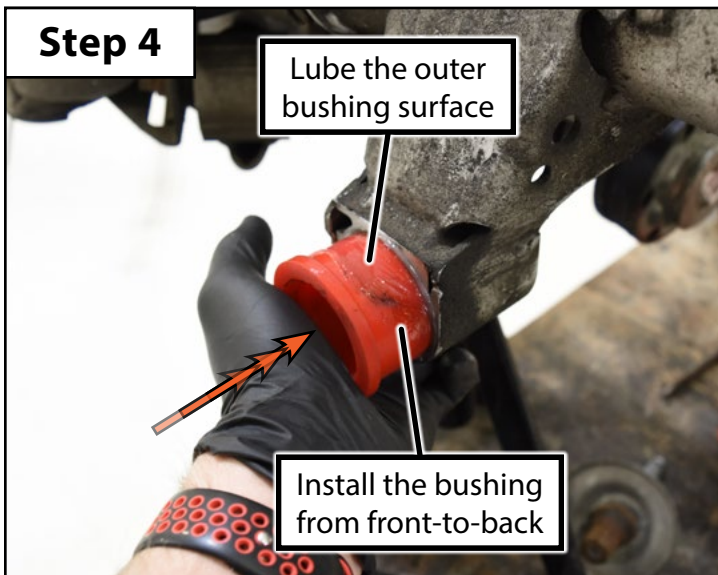
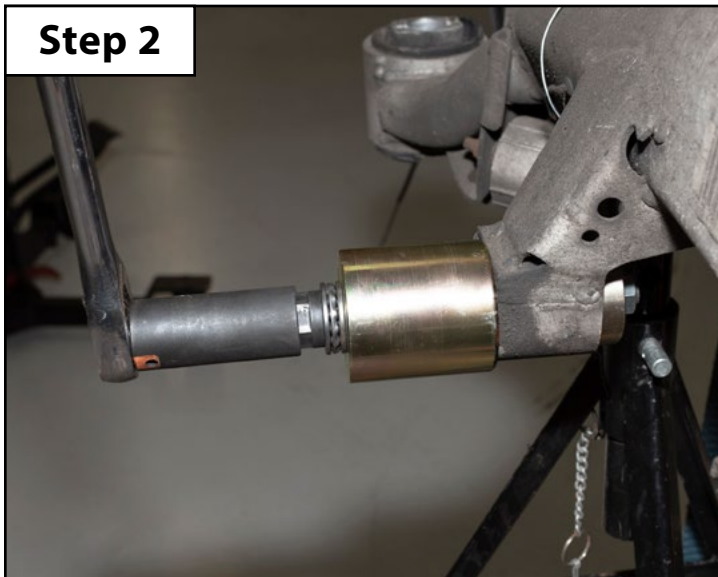
Step 1



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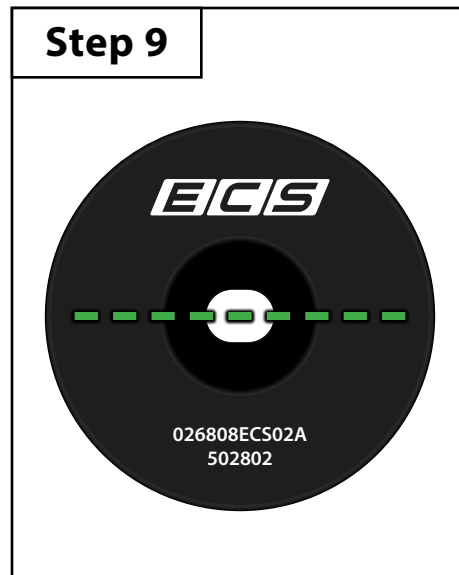
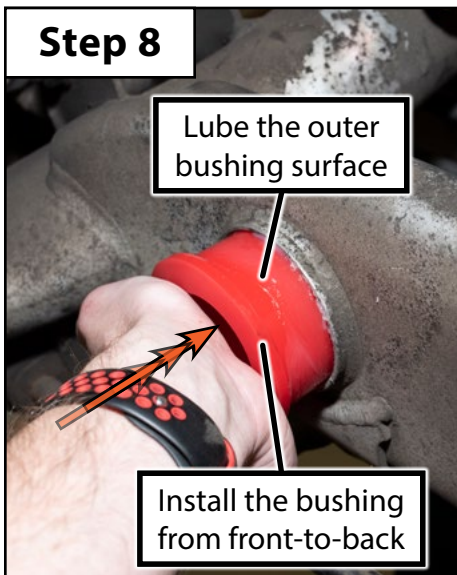
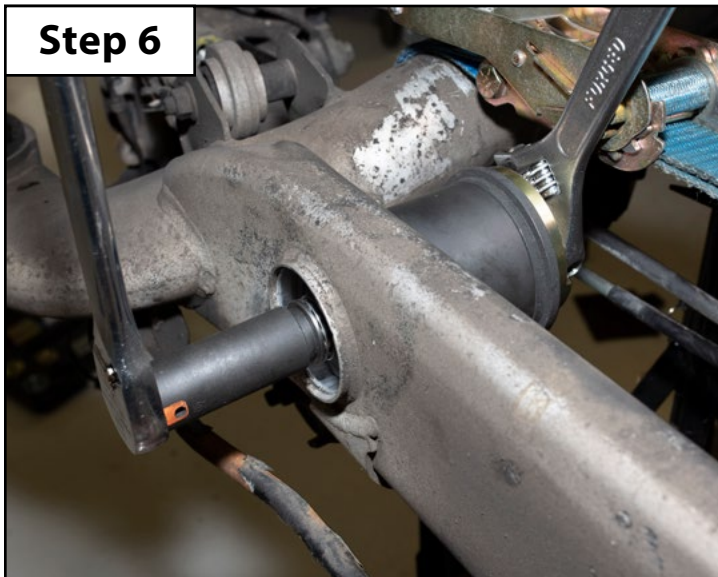
Section 2: Installing the New Poly Bushings

- Step 2**
 - Press the stock forward position differential bushing out of the subframe using the OEM tool, or our Schwaben Subframe & Differential Bushing Tool Set (ES#3438927).
- Step 3**
 - Clean out the bushing bore as needed to remove any rust or leftover bushing material.
 - Scotch-Brite™ pads work very well for this.
- Step 4**
 - Remove the center sleeve from the poly bushing, apply lube to the outer bushing surface.
 - Push the poly bushing into the subframe from front-to-back as shown.
 - ***The lip on the poly bushing should be on the front side of the subframe.***
- Step 5**
 - Press the sleeve into the bushing from front-to-back as shown.
 - You may need to tap this sleeve in with a soft-face or deadblow hammer, ***we do not recommend lubing the outer surface of the sleeve.***



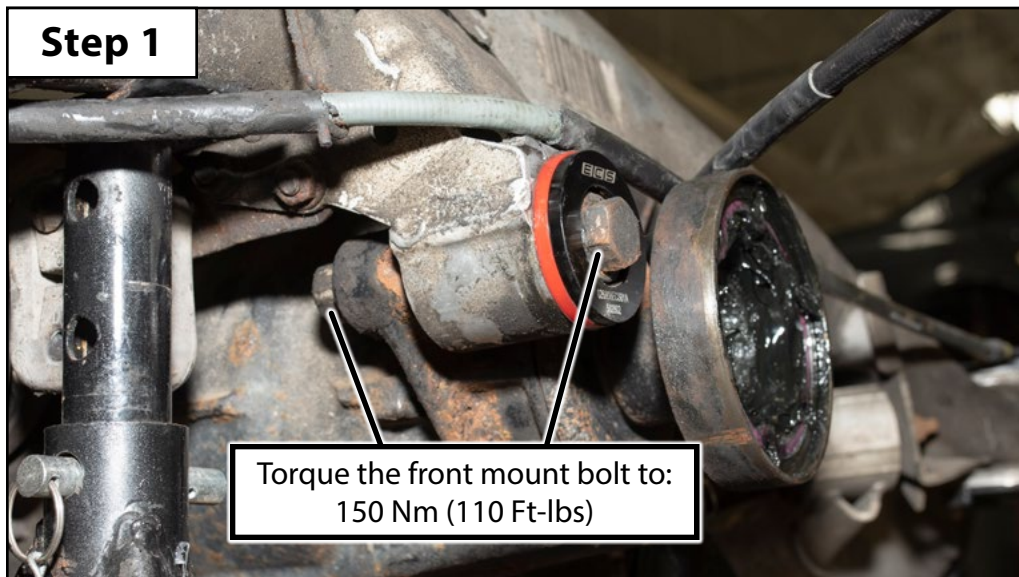
Section 2: Installing the New Poly Bushings

- Step 6** • Press the stock rearward position differential bushings out of the subframe using the OEM tool or equivalent.
- Step 7** • Clean out the bushing bores as needed to remove any rust or leftover bushing material.
 - Scotch-Brite™ pads work very well for this.
- Step 8** • Remove the center sleeve from the poly bushing, apply lube to the outer bushing surface.
 - Push the poly bushing into the subframe from back-to-front as shown.
 - The lip on the poly bushing should be on the back side of the subframe.
- Step 9** • Take note of the slotted hole inside the bushing sleeve.
 - This slot must be level side-to-side once installed into the bushing.
- Step 10** • Press the sleeve into the bushing from back-to-front as shown.
 - You may need to tap this sleeve in with a soft-face or deadblow hammer, we do not recommend lubing the outer surface of the sleeve.



Section 3: Reassembly

- Step 1**
- Lift the differential back up into place and loosely install the mount bolts.
 - Torque the front mount bolt to 150 Nm (110 Ft-lbs).
- Step 2**
- Torque the rear mount bolts to 105 Nm (77 Ft-lbs).



Section 3: Reassembly

- Step 3**
- Reinstall the subframe into the vehicle in the reverse order of removal.
 - Reconnect the parking brake cables and adjust them as needed.
 - With the rear wheels lifted up off the ground, the parking brake should begin to engage on the third click of the lever.
 - Tighten the lower shock bolts to 127 Nm (94 Ft-lbs) final torque with the suspension set at ride height.
- Step 4**
- Follow the torque table in the **Step 4 photo** below for torque specs on the driveshaft joint.
 - If you find that this joint has compression nuts, they must be replaced with finned nuts (per BMW service information).

