

BMW E9x M3 Poly Rear Differential Bushing Set Installation Instructions - **ES4070805**



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



As these vehicles age, the differential bushings tend to show signs of stress and deterioration resulting in bushing deflection and excess drivetrain movement. The differential sits directly between your gas pedal and the wheels, so these bushings play a critical role in the responsiveness of your drivetrain. Our performance bushings are constructed of firm yet responsive 95A polyurethane and feature anodized aluminum center sleeves. Our bushings are designed to be a direct replacement for the stock units and install with ease. In these instructions we will guide you through the installation process with the subframe removed from the vehicle, however it is important to note that it may be possible to press these bushings into place by lowering the differential and subframe slightly without completely removing them. We found that the additional clearance and visibility that dropping the subframe provides is worth the additional work required to remove the subframe completely.

Install time: 1 hour with subframe removed

Parts list for kit: Two front position differential bushings
One rear position differential bushing



**Be sure to completely read the notes below
& instructions before installing the mounts.**

Note: Always use press tooling which correctly fits the surface of the bushings and the subframe. If proper care is not taken to ensure that the bushings go in correctly damage to the subframe **will** result.

These installation instructions have been broken up into several sections:

1) Removing the Rear Subframe

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2) Installing the New Poly Bushings

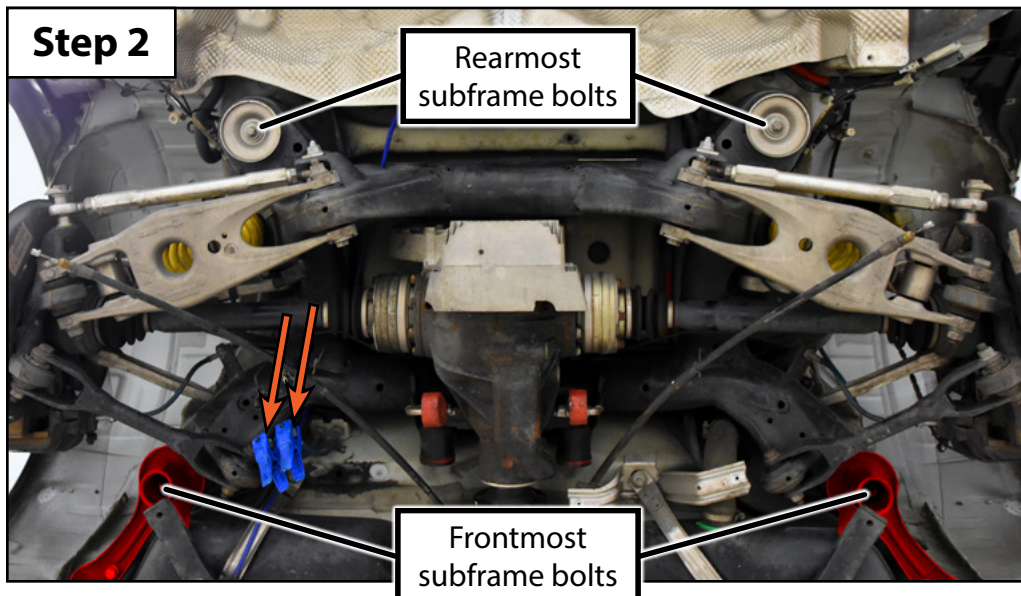
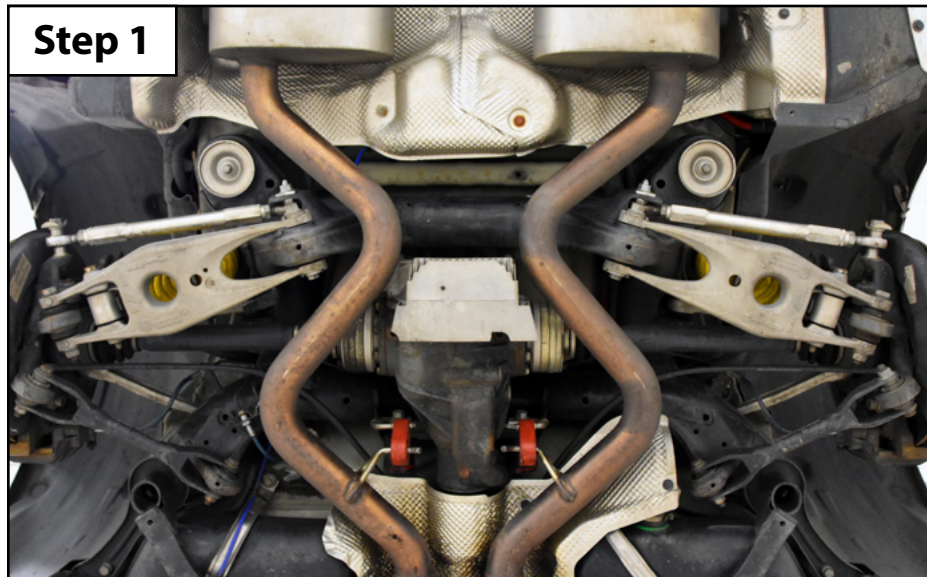
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3) Reassembly

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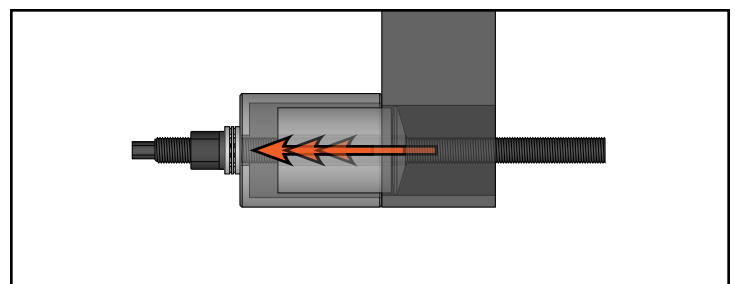
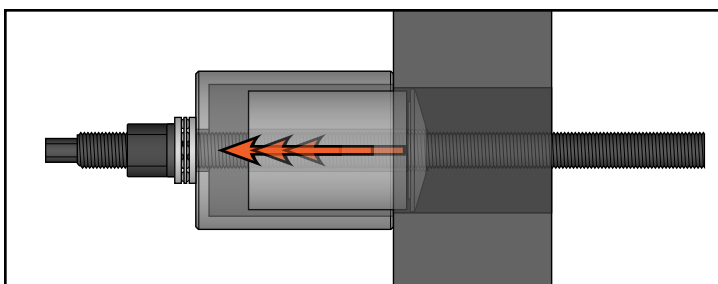
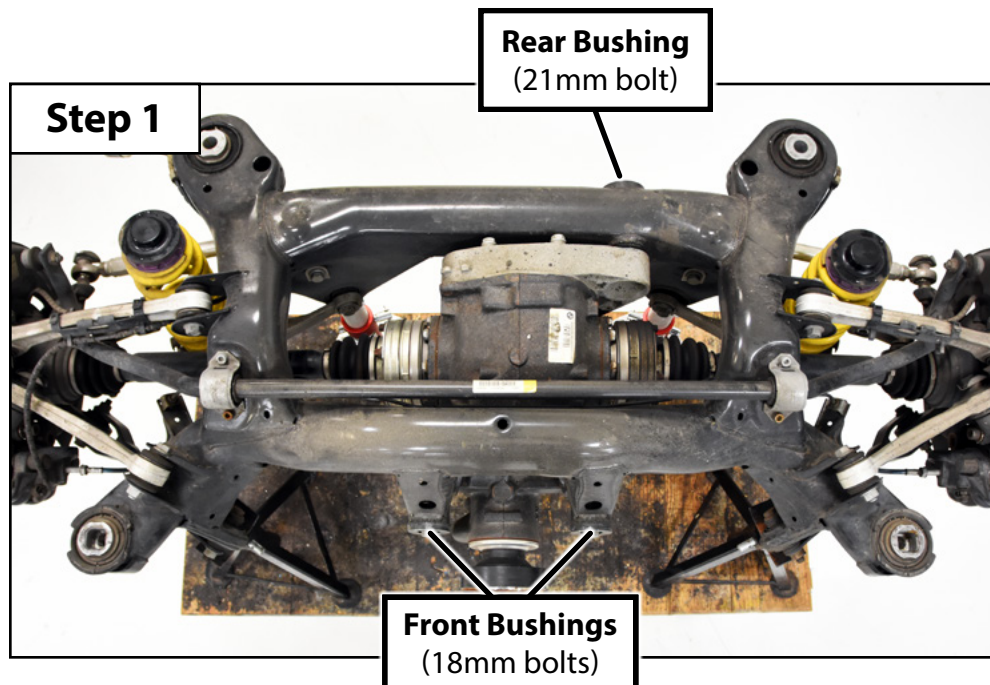
Section 1: Removing the Rear Subframe

- Step 1**
- Prep the rear subframe for removal (reference the **Step 1 Photo**). This will include the following:
 - Disconnect the negative (-) battery cable.
 - Remove the rear wheels.
 - Remove the cross brace.
 - Remove the exhaust system and heat shields.
 - Unbolt the driveshaft center bearing from the body.
 - Unbolt the driveshaft from the differential and hang it out of the way.
 - Disconnect wiring harness connections between the subframe and the chassis.
- Step 2**
- Remove the subframe from the vehicle (reference the **Step 2 Photo**). This will include the following:
 - Unbolt the brake calipers from the spindles and hang them out of the way.
 - Remove the rotors and set them aside.
 - Disconnect the parking brake cables.
 - Disconnect the brake lines from the body (arrows in the **Step 2 Photo**).
 - Unbolt the shocks from the control arms.
 - Remove the bolts which secure the tension arms (highlighted in **RED** in the **Step 2 Photo**) to the vehicle.
 - Support the subframe from below.
 - Remove the subframe bolts and carefully lower the subframe.



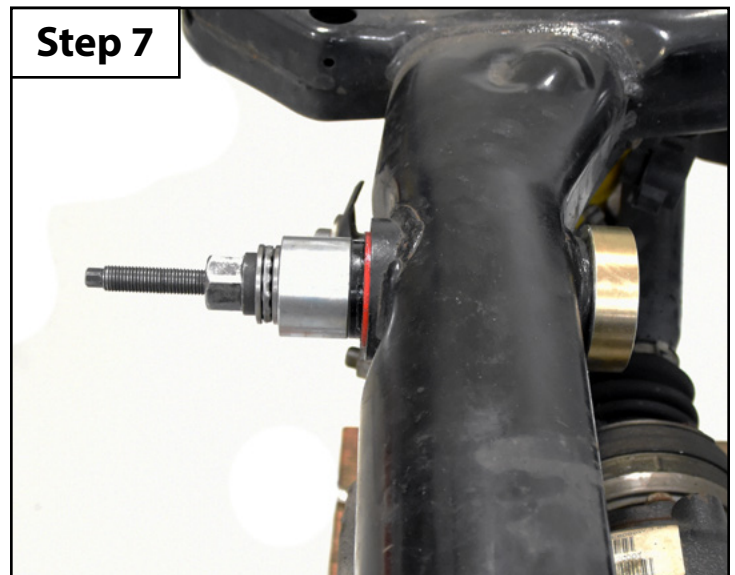
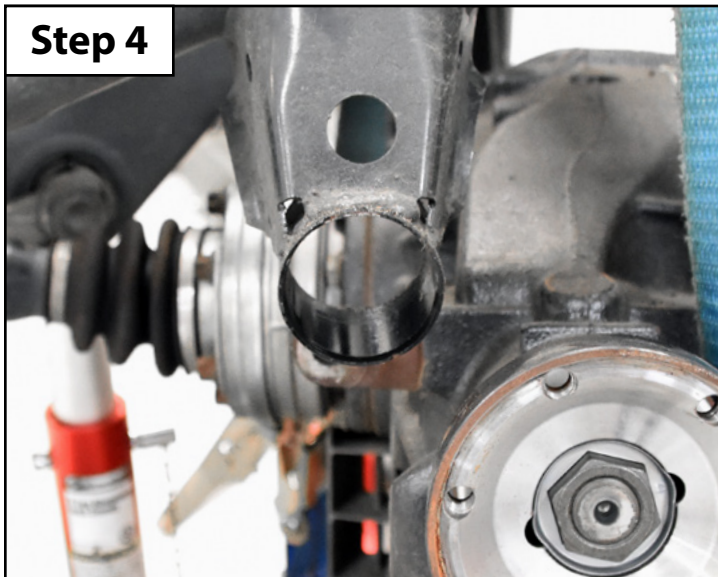
Section 2: Installing the New Poly Bushings

- Step 1**
- Unbolt the three differential bolts and carefully lower the differential so as not to damage it or overextend the rear axles (**Step 1 Photo**).
- Step 2**
- Press the stock rear position differential bushing out of the bore in the subframe (arrow in the **Step 2 Photo**) using the BMW tool or equivalent.
- Step 3**
- Press the stock front position differential bushings out of the bores in the subframe (arrow in the **Step 2 Photo**) using the BMW tool or equivalent.

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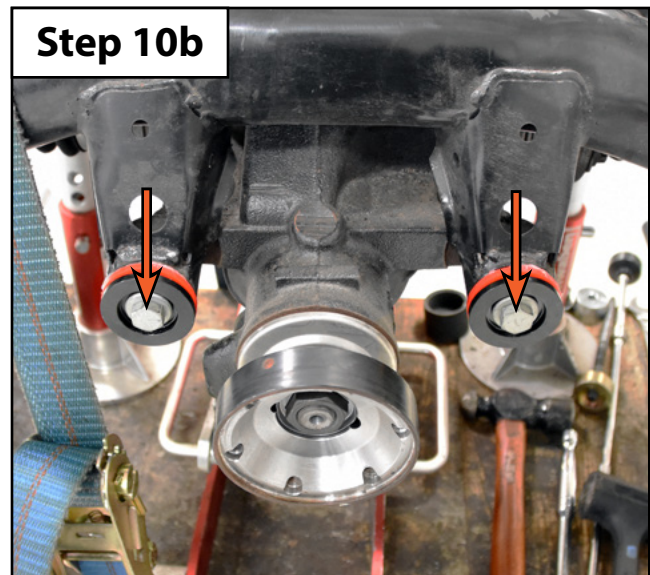
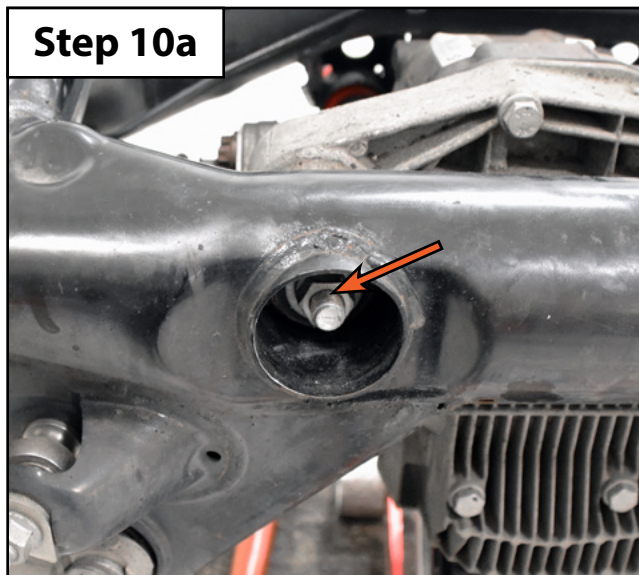
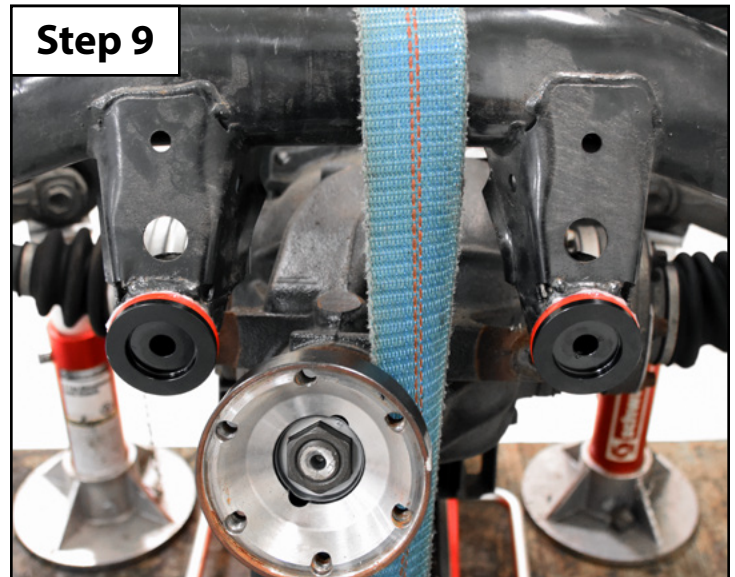
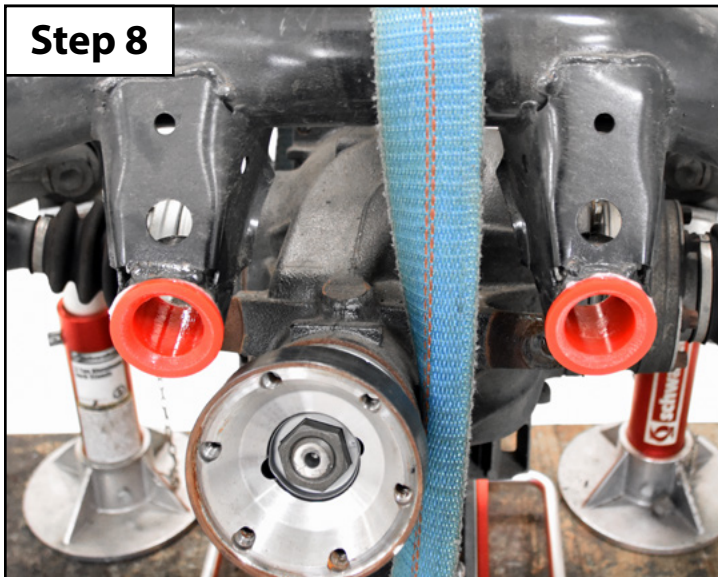
Section 2: Installing the New Poly Bushings

- Step 4** • Clean the bushing bore, remove any rust or leftover bushing material as needed (**Step 4 Photo**).
- Step 5** • Apply poly lube to each of the new bushings before attempting to press them in (**Step 5 Photo**).
- Step 6** • Slide the bushing sleeve into the bushing all the way as shown (**Step 6 Photo**).
- Step 7** • Slide the assembled bushing into the rear of the subframe and press it into place until it is flush with the inside of the subframe (**Step 7 Photo**).

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Section 2: Installing the New Poly Bushings

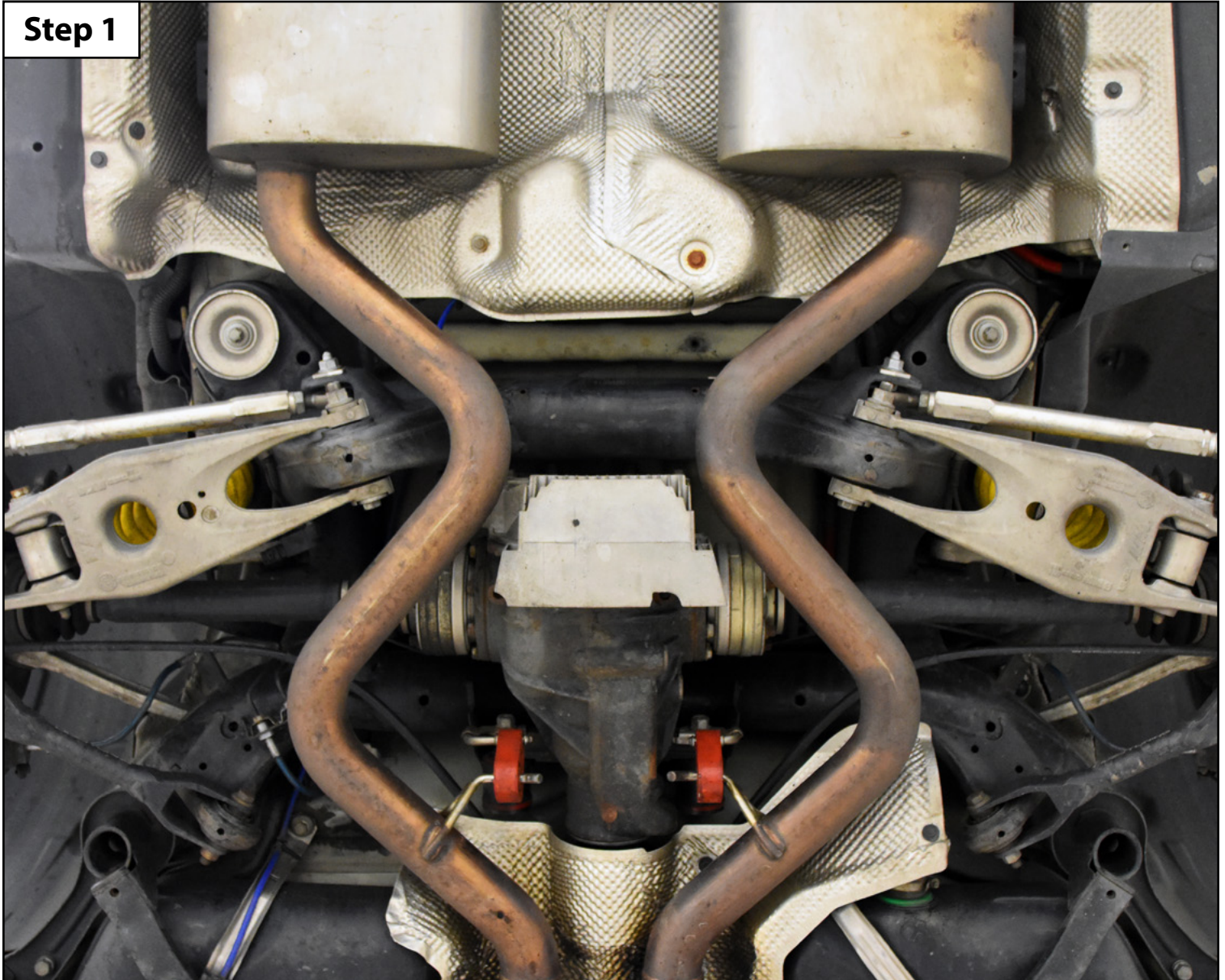
- Step 8**
- Press the front position poly bushings into the housings as shown (**Step 8 Photo**).
- Step 9**
- Press the sleeves into the bushings as shown (**Step 9 Photo**).
- Step 10**
- Lift the differential back up into place.
 - Loosely install the provided rear bolt and nut (arrow in the **Step 10a Photo**).
 - Loosely install the provided front bolts (arrows in the **Step 10b Photo**).
 - Torque the front position differential bolts (**Step 10a Photo**) to 100 Nm (74 Ft-lbs).
 - Torque the rear position differential bolt (**Step 10b Photo**) to 125 Nm (92 Ft-lbs).

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Section 3: Reassembly

- Step 1**
- Reinstall the subframe into the vehicle in reverse order of removal (**Step 1 Photo**). This will include:
 - Install and torque the provided subframe bolts to 108 Nm (80 Ft-lbs).
 - Tighten shock absorber bolts to their final torque with the suspension set at ride height.
 - Bleed the braking system.
 - Test the parking brake and adjust if needed.
 - Perform a 4-wheel alignment.

Step 1



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