

BMW E9x Non-M Performance Differential Bushing Set Install

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 is 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

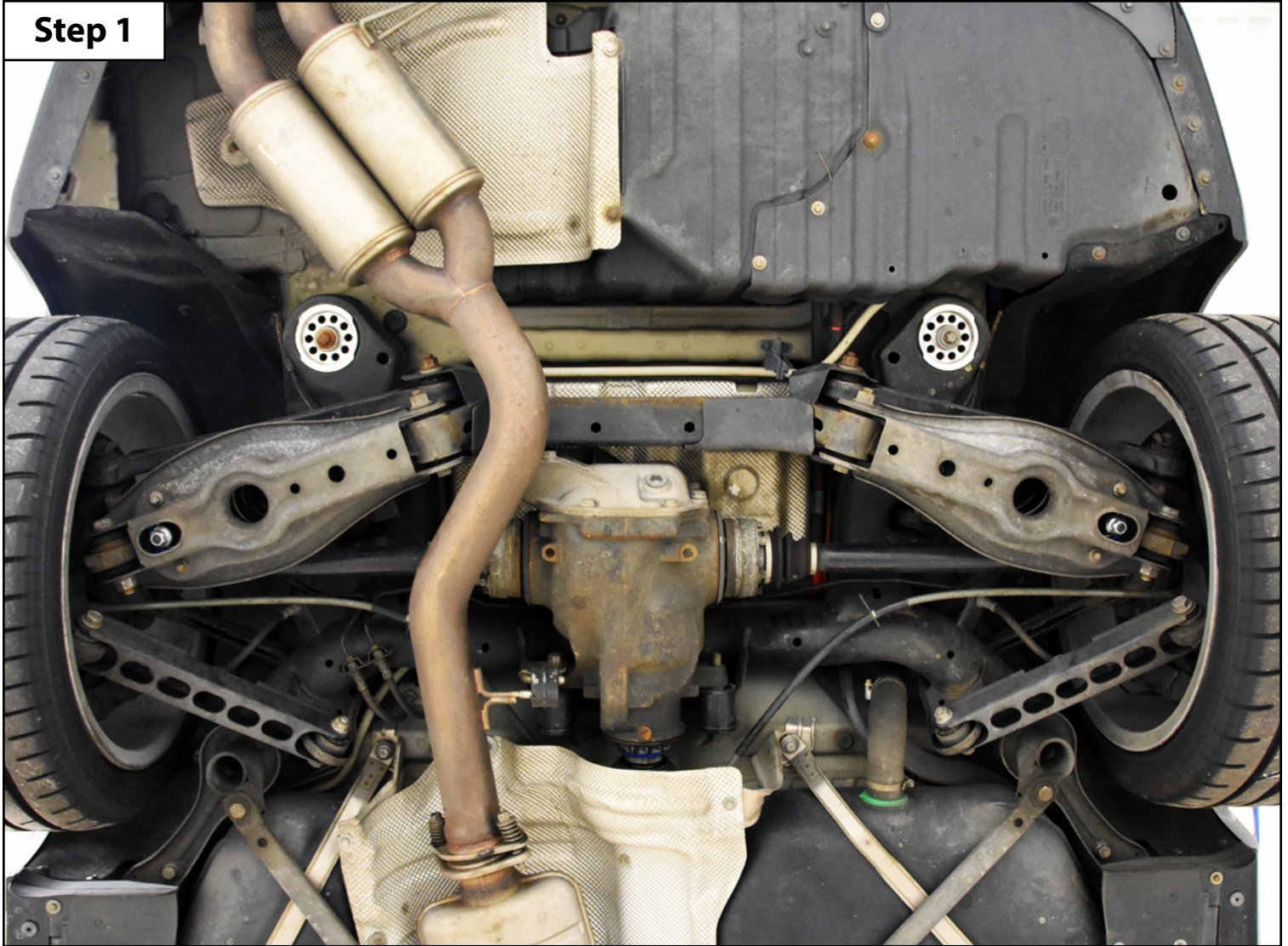


**Be sure to completely read the notes below
& instructions before installing the mounts.**

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.

Section 1: Subframe Removal

Step 1

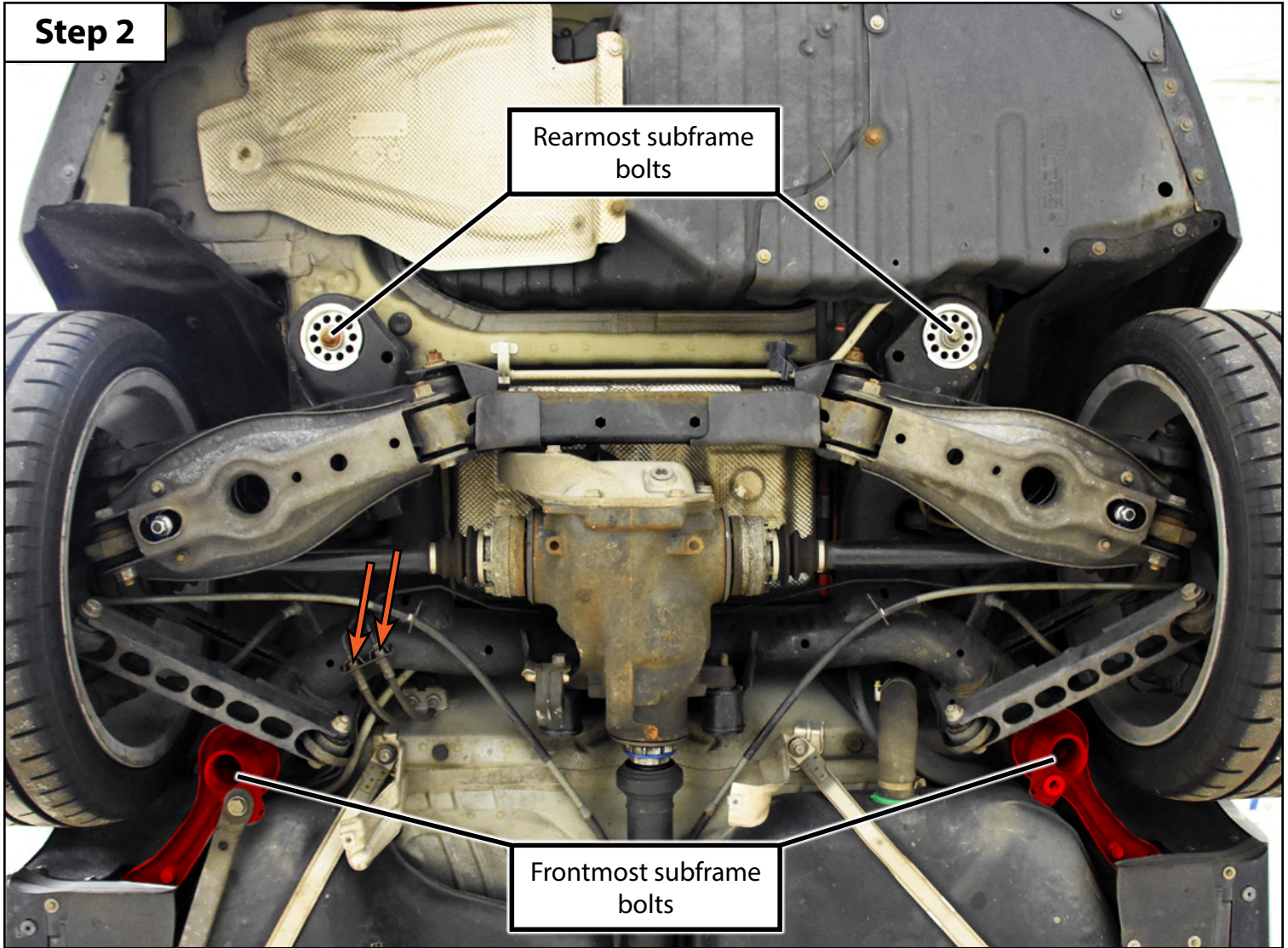


Step 1: Before removing the subframe, complete the following steps:

- Disconnect the battery
- 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
- Disconnect all wiring harness connections between the subframe and the chassis

Section 1: Subframe Removal

Step 2

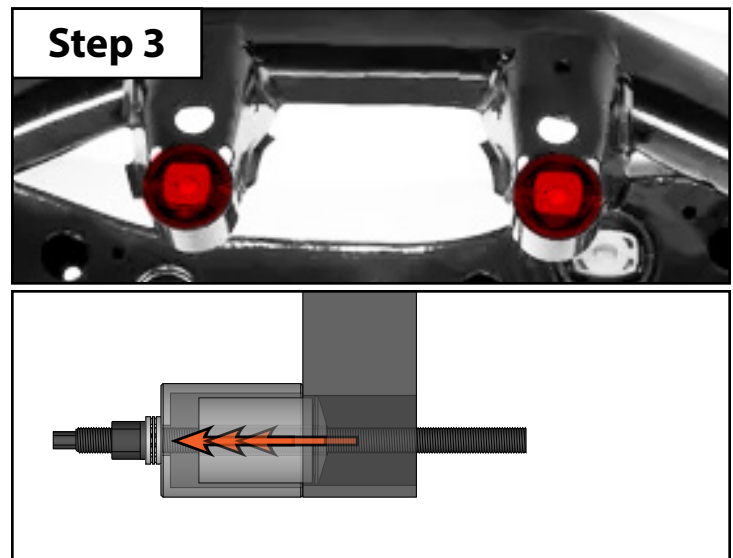
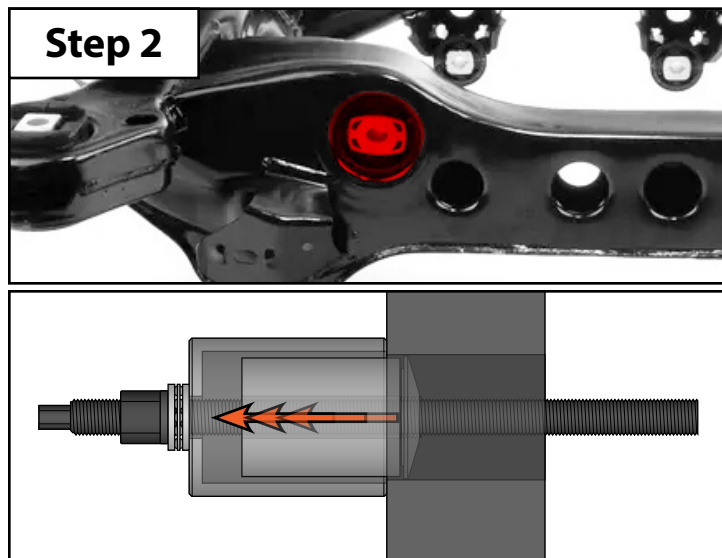
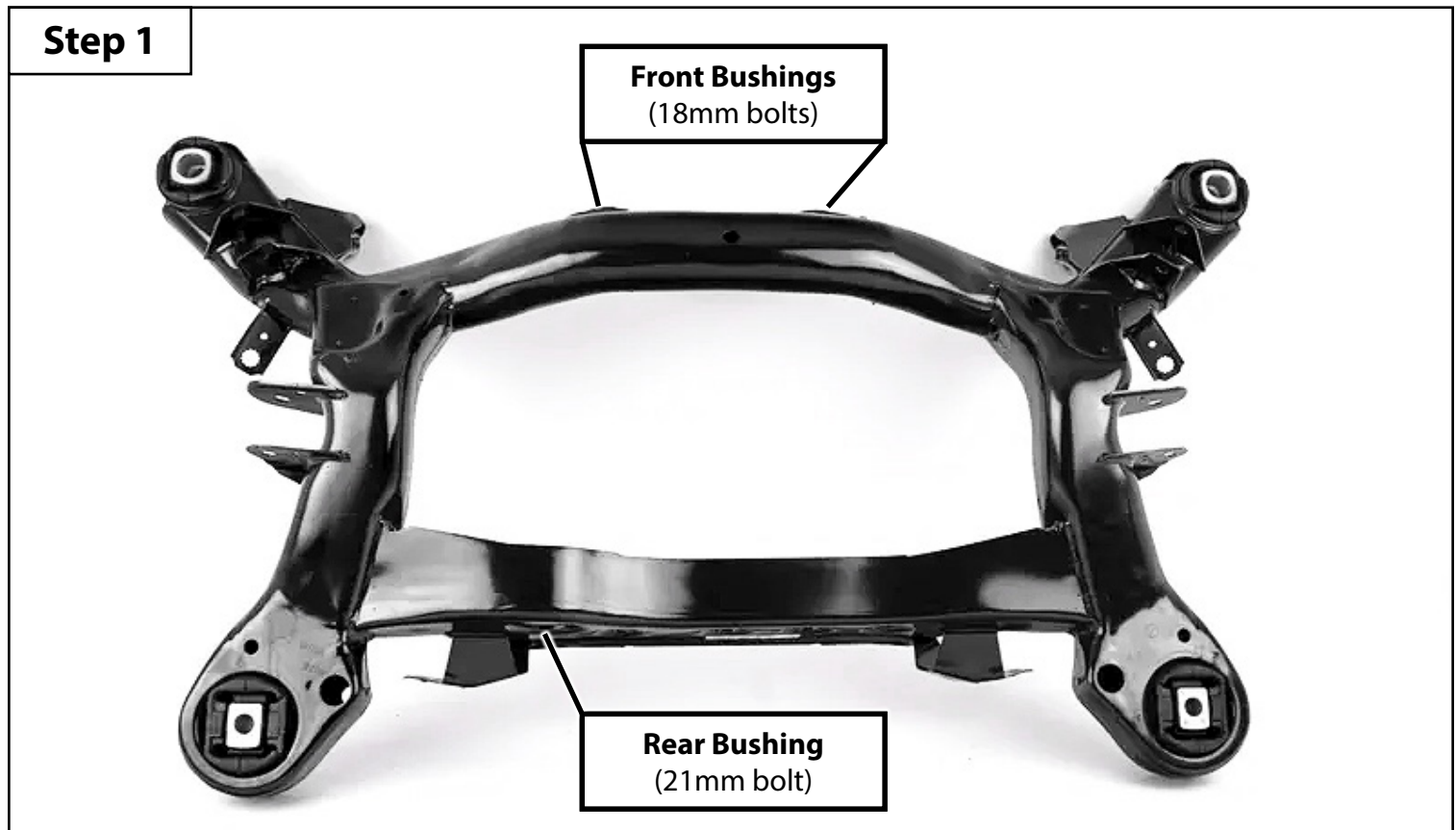


Step 2: Remove the subframe from the vehicle. This will include the following steps:

- Unbolt the calipers 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)
- Unbolt the shocks from the control arms
- Remove the bolts which secure the tension arms (highlighted in **RED**) to the vehicle
- Support the subframe from below
- Remove the subframe bolts
- Carefully lower the subframe and safely support it

Section 2: Stock Bushing Removal

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



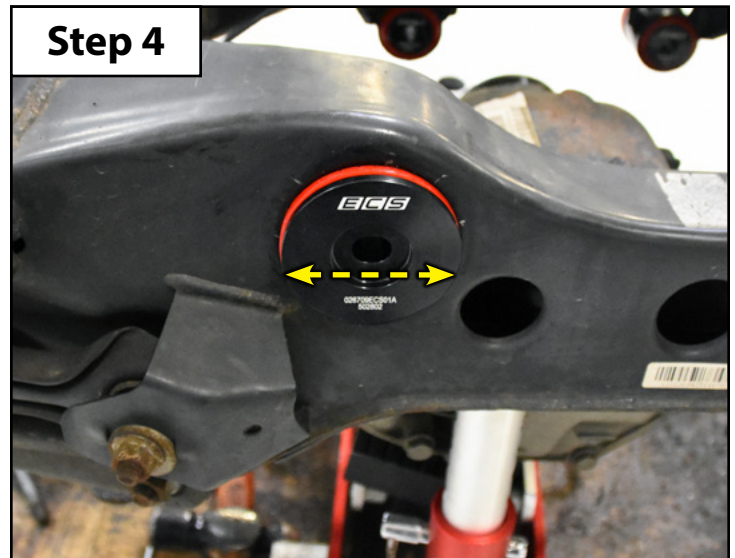
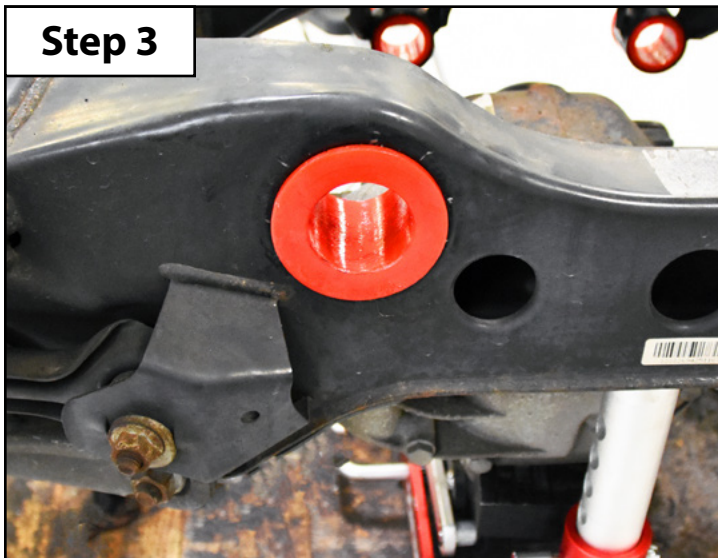
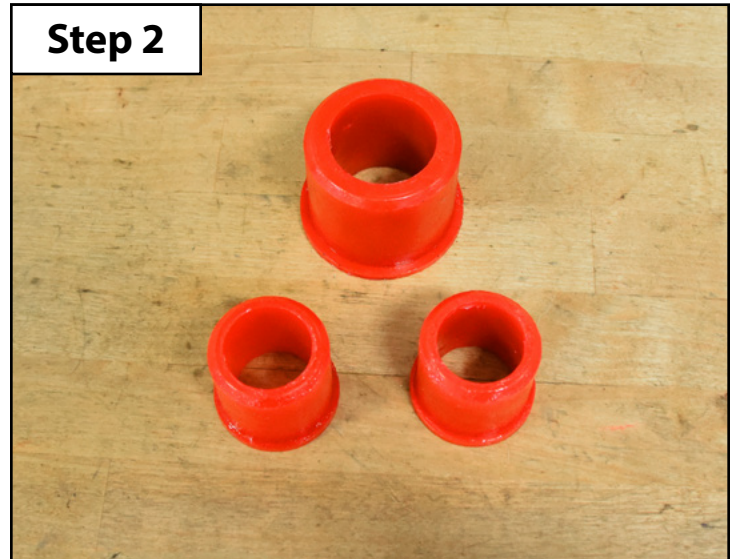
Section 3: ECS Bushing Installation

Step 1: Clean the bushing bore, remove any rust or leftover bushing material as needed.

Step 2: Apply poly lube to each of the new bushings before attempting to press them in.

Step 3: Press the rear position poly bushings into the housing as shown until the lip is flush with the subframe.

Step 4: Slide the bushing sleeve into place as shown, ensuring the ECS logo and the slotted hole remains horizontal.



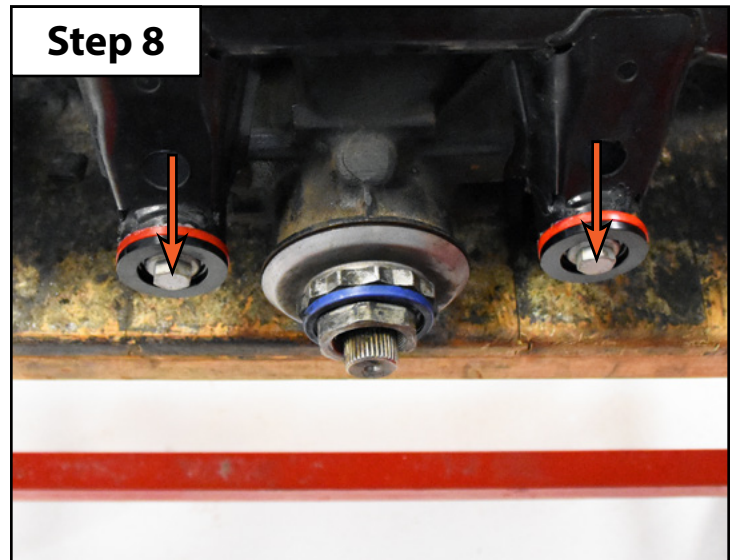
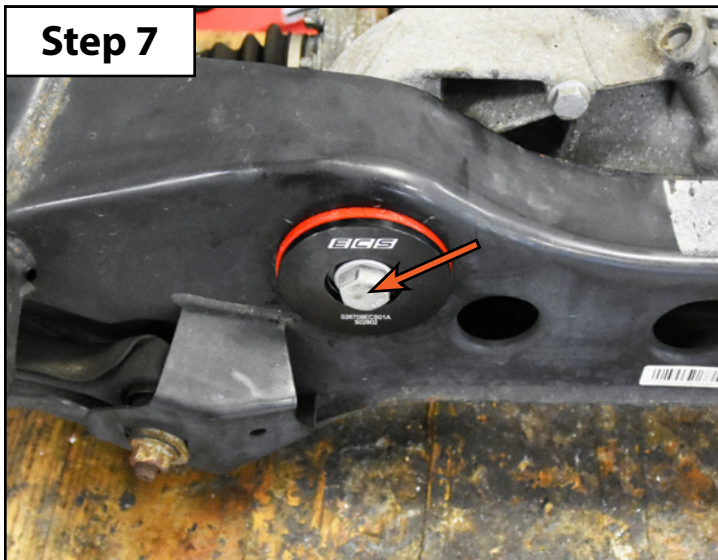
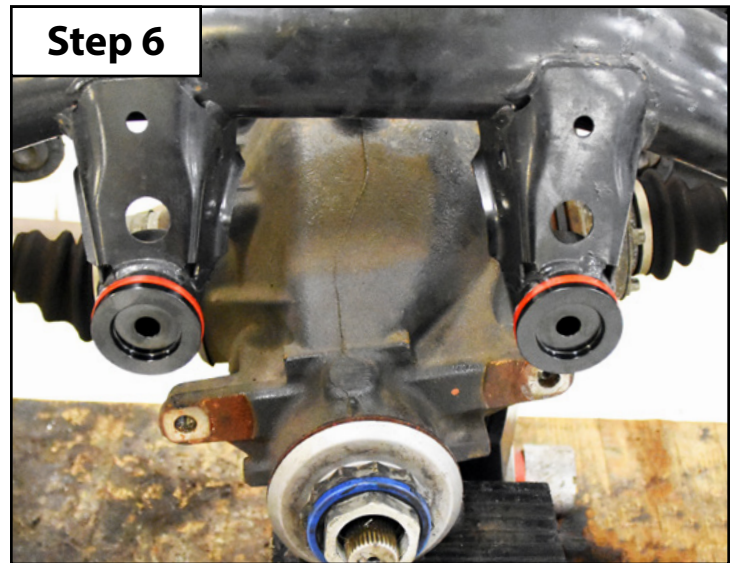
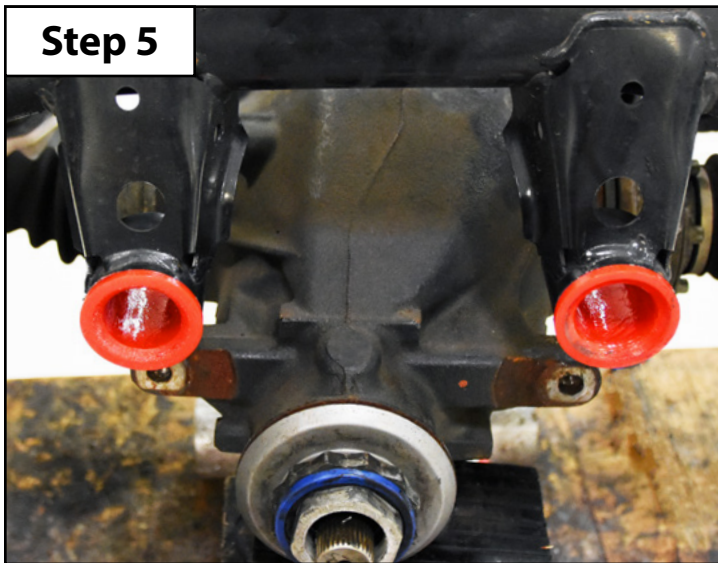
Section 3: ECS Bushing Installation

Step 5: Press the front position poly bushings into the housings as shown.

Step 6: Press the sleeves into the bushings as shown.

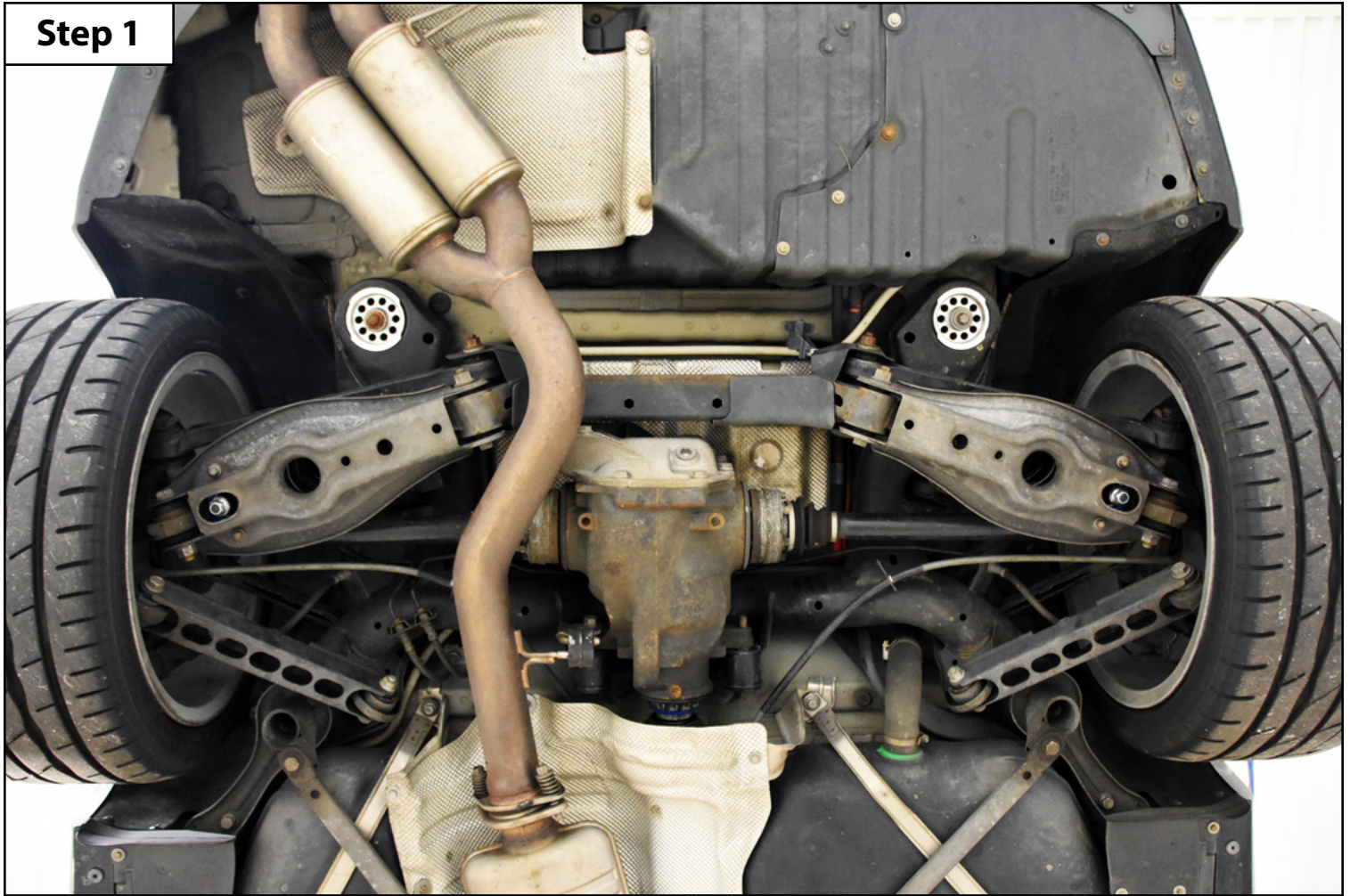
Step 7: Lift the differential back up into place and loosely install the provided rear bolt and nut (arrow).

Step 8: Install the new provided front differential bolts (arrows) and torque them to 100 Nm (74 Ft-lbs), then go back and torque the rear differential bolt to 125 Nm (92 Ft-lbs).



Section 4: Reinstall the Subframe

Step 1



Step 1: Reinstall the subframe into the vehicle in reverse order of removal:

- 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