

BMW E9x Poly Rear Subframe Bushing Set Installation Instructions - **ES4146948**



Thank you for purchasing your new ECS Tuning Poly Rear Subframe Bushing Kit, we appreciate your business!



These installation instructions have been broken up into several sections:

1) Introduction

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2) Disassembly

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3) Subframe Bushing Installation

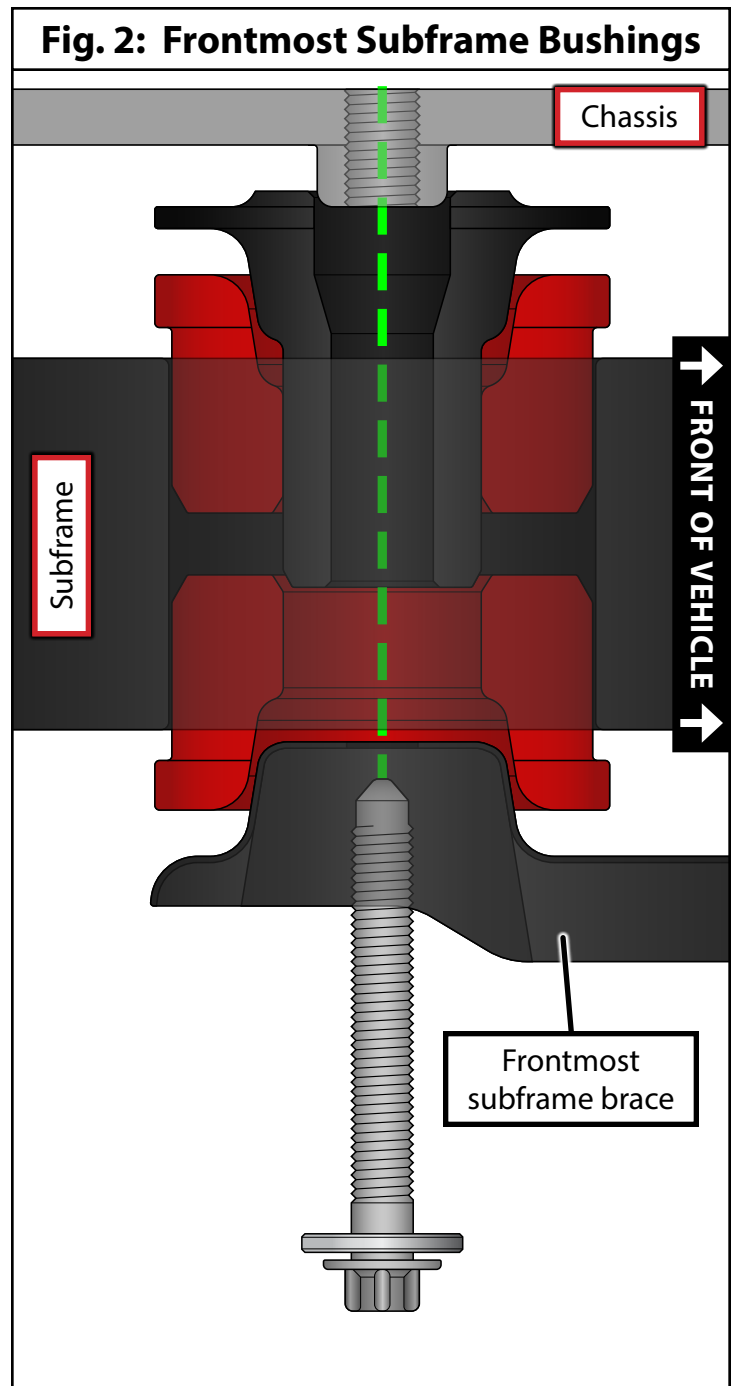
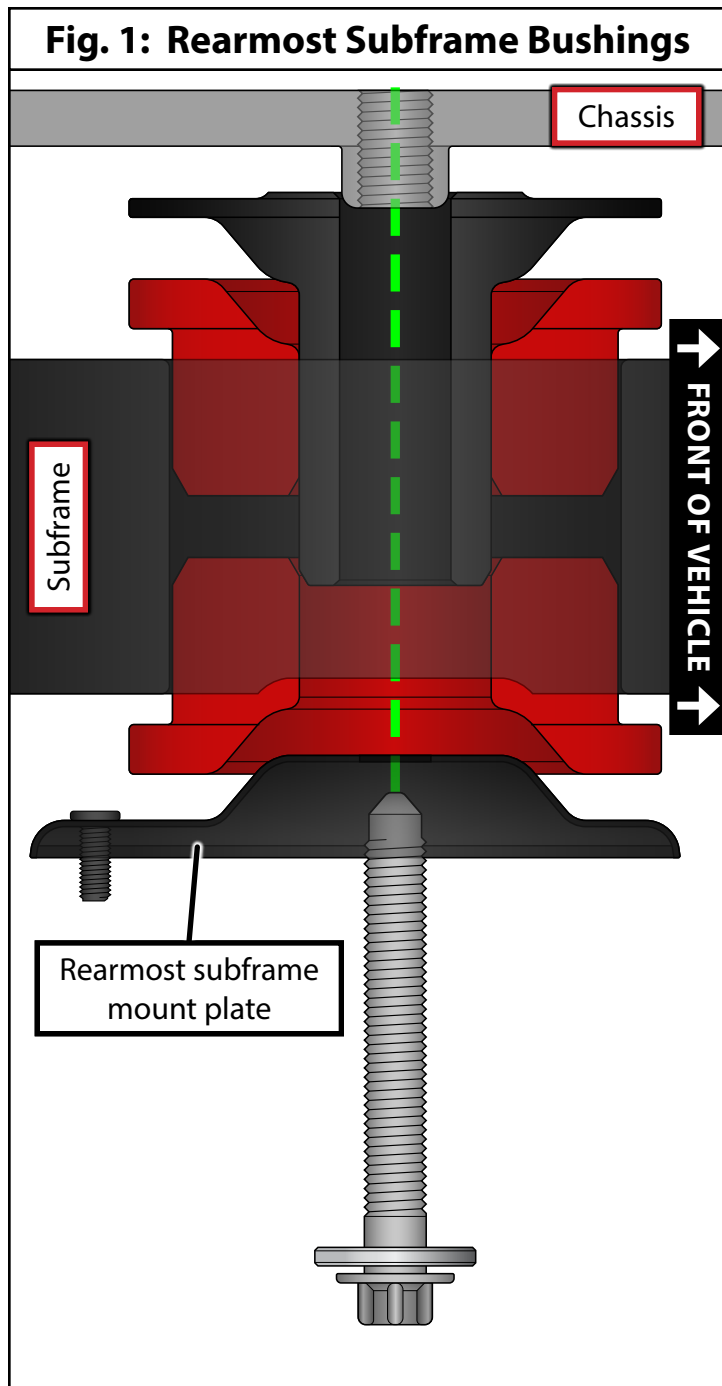
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4) Reassembly

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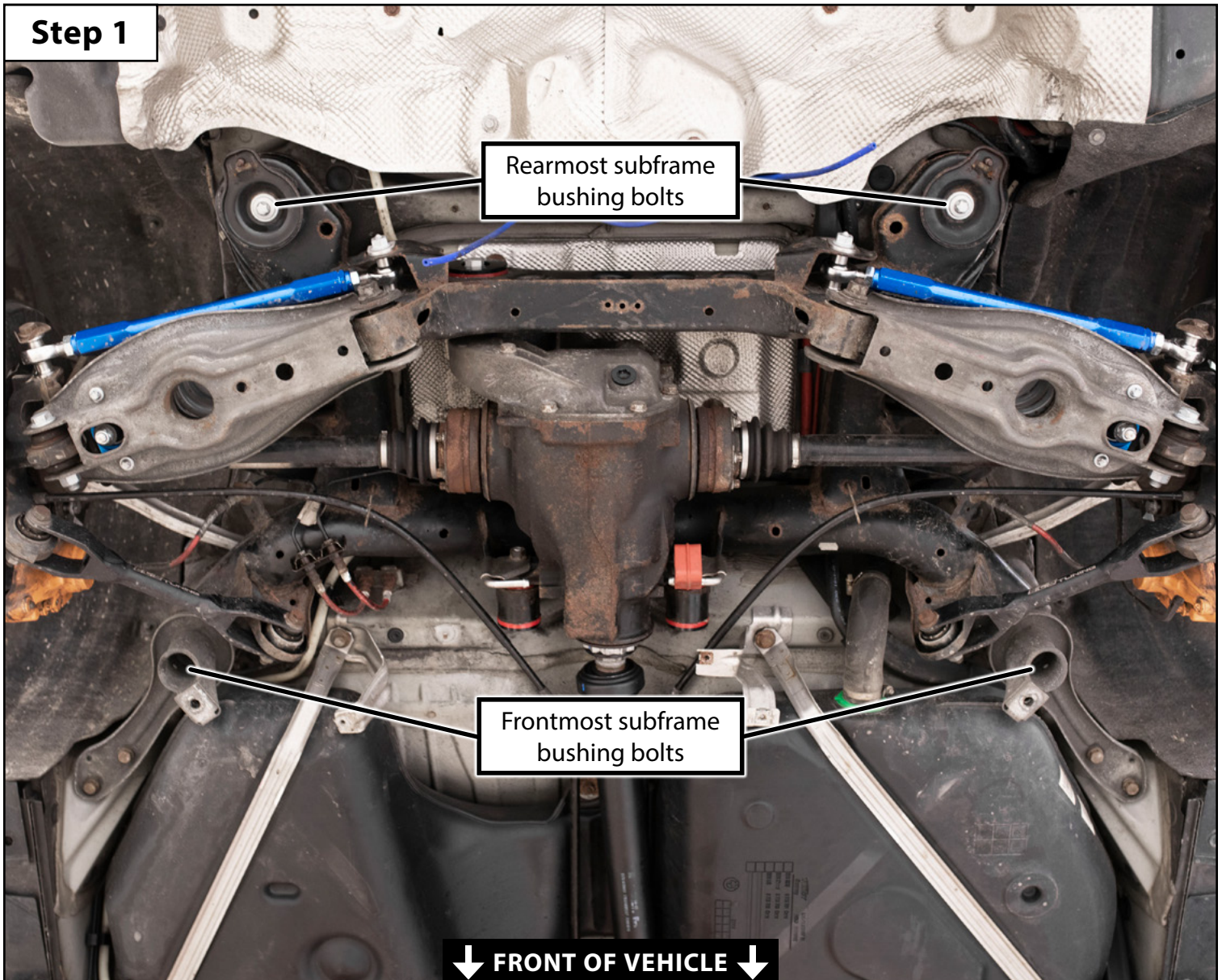
Section 1: Introduction

- Let's take a moment and review how our bushings are designed.
- The OEM bushings feature a one-piece design a flange on one end.
 - Voids inside these bushings are used to help absorb driveline vibrations, but can allow for excess subframe movement.
- Our bushings are 90A durometer polyurethane, they are completely solid internally but are split into two separate halves for easier installation. Our billet aluminum center sleeve is inserted into the bushings and mates up against the chassis and the subframe brackets (see Fig. 1 and Fig. 2 below).



Section 2: Disassembly

- Step 1**
- Remove the subframe from the vehicle (**Step 1 photo**). This will include the following steps:
 - Safely lift and support the vehicle.
 - Remove the rear wheels.
 - Remove the exhaust system and heat shields.
 - Remove all applicable underbelly panels.
 - Remove the driveshaft.
 - Disconnect the rear vehicle level sensor from the LCA (if applicable).
 - Remove the rear coil springs.
 - Disconnect the rear brake pad sensor.
 - Remove and safely support the rear brake calipers.
 - Disconnect the parking brake cables from the drums inside the rear rotors.
 - Disconnect all wiring harness connections between the subframe and the chassis.
 - Disconnect the brake lines from the subframe.
 - Support the subframe from below.
 - Remove the subframe bolts and brackets.
 - **NOTE:** The subframe bolts may be different lengths, *note their length/location for reinstallation.*
 - Lower the subframe and safely support it.



Section 2: Disassembly

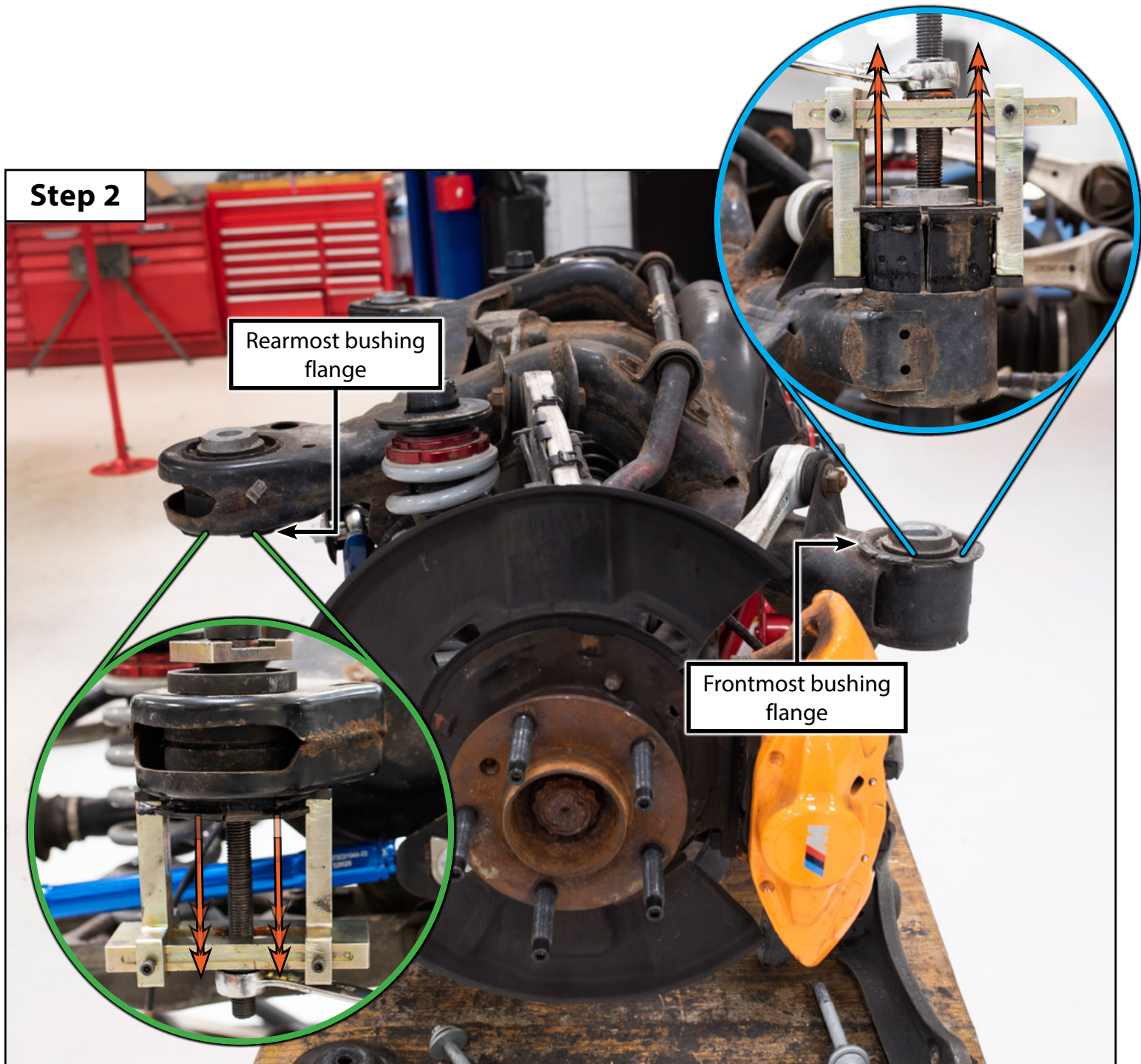
Step 2 • Remove the stock subframe bushings (**Step 2 photo**). There are two ways of doing this:

1. Use the BMW tool or equivalent.
2. Use a chisel to break off the plastic flanges, then use a press to remove them.

NOTE: The frontmost bushings must be removed by pulling them **UPWARD** (**BLUE** inset photo below).

NOTE: The rearmost bushings must be removed by pulling them **DOWNWARD** (**GREEN** inset photo below).

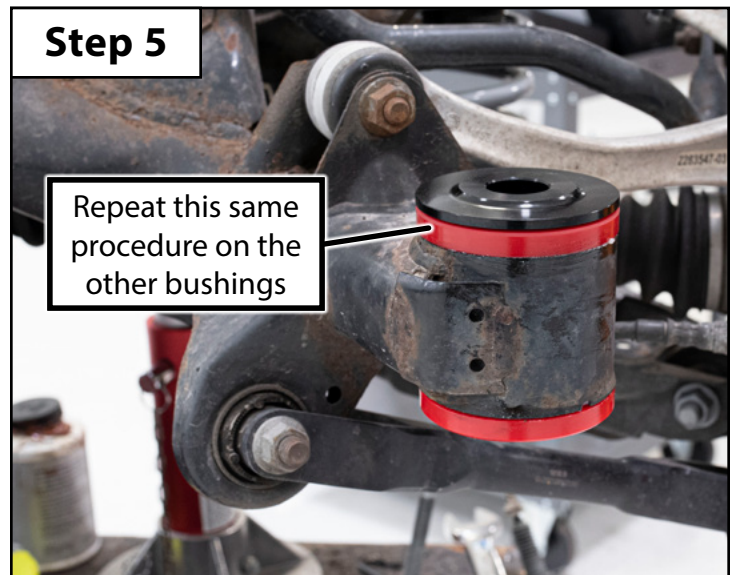
CAUTION: Be careful not to deform the subframe.



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Section 3: Subframe Bushing Installation

- Step 1**
- Clean the inside of the bushing bore in the subframe, remove any leftover bushing material (**Step 1 photo**).
 - A Scotch-Brite pad makes quick work of this step.
- Step 2**
- Apply lube to the outer surface of each bushing half (**Step 2 photo**).
- Step 3**
- Press the bushing halves into the subframe until they bottom out (**Step 3 photo**).
 - You may find that you need to tap the bushings into position with a soft-face or deadblow hammer.
- Step 4**
- Apply lube to the outer surface of the sleeve (not shown).
 - Press the sleeve into the bushing from top-to-bottom as shown (**Step 4 photo**).
 - You may find that you need to tap the sleeve into position with a soft-face or deadblow hammer.
- Step 5**
- Repeat steps 1-4 on the remaining subframe bushings (**Step 5 photo**).



Section 4: Reassembly

- Step 1**
- Reinstall the subframe into the vehicle in the reverse order of removal (**See Fig. 1 below**).
 - Tighten all suspension fasteners to final torque with the vehicle set to ride height.
 - Tighten the subframe bolts to 108 Nm.
 - Ensure that the subframe bushings and sleeves are fully seated (**See Fig. 2 & Fig. 3 below**).
 - Reconnect the brake lines.
 - Bleed the braking system.
 - Test the parking brake and adjust if needed.
 - Perform a 4-wheel alignment.

