



BMW F8x/G8x Rear Differential Bushing Kit Installation Instructions



INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

Turner Motorsport cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



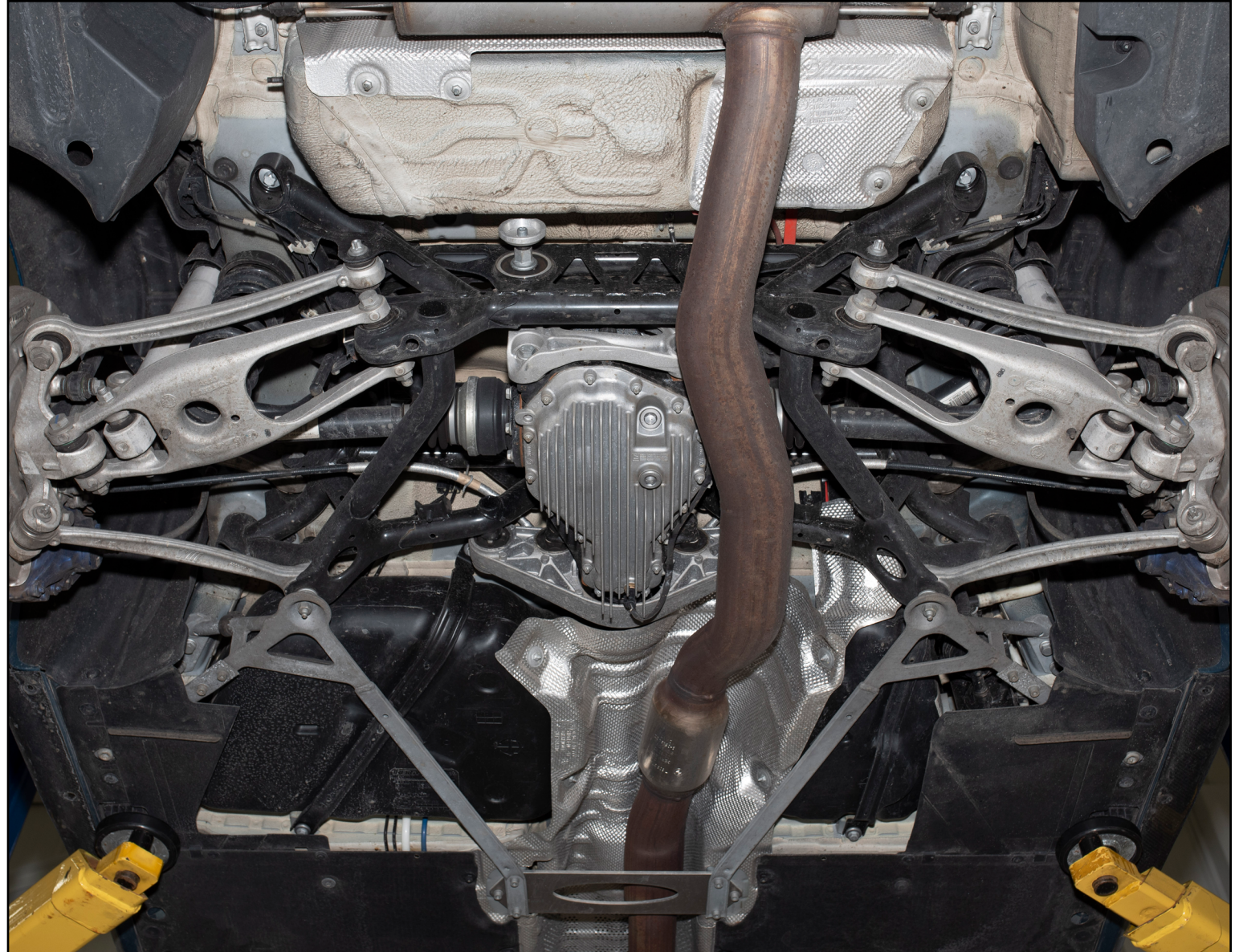
NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REPLACING THE REAR DIFFERENTIAL BUSHINGS

Step 1:

Remove the subframe from the vehicle by doing the following:

- Remove the rear wheels, brake calipers, and brake rotors.
- Disconnect the parking brake cables and pull them free from the rear spindle housings.
- Remove the underbody panels, braces, exhaust system and heat shields.
- Disconnect the driveshaft from the rear differential.
- Remove the rear springs and the lower shock bolts.
- Disconnect all connectors and harnesses from the rear subframe and differential.
- Support the subframe from below, remove the bolts and brackets, and lower the subframe.



REPLACING THE REAR DIFFERENTIAL BUSHINGS

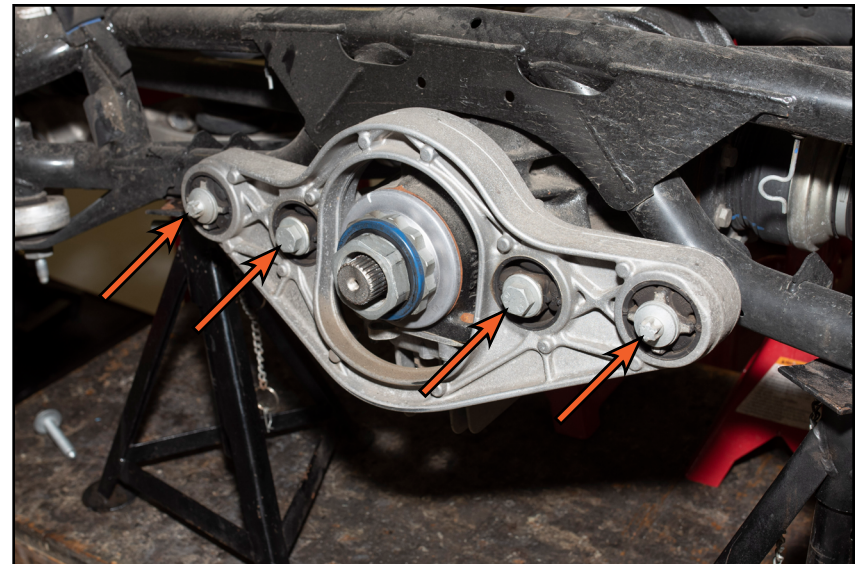
Step 2:

Support the subframe from below as shown, allowing clearance for the differential to be lowered, and properly secure it to your working area to prevent movement.



Step 3: 18mm, E14 Torx Socket & Ratchet

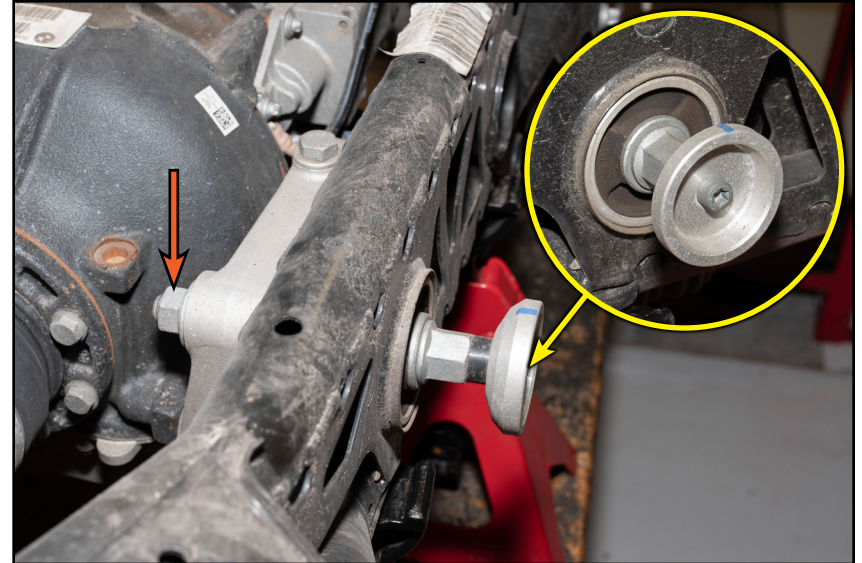
Support the differential from below then remove the four bolts (arrows) that secure the front mounting plate to the subframe and differential.



REPLACING THE REAR DIFFERENTIAL BUSHINGS

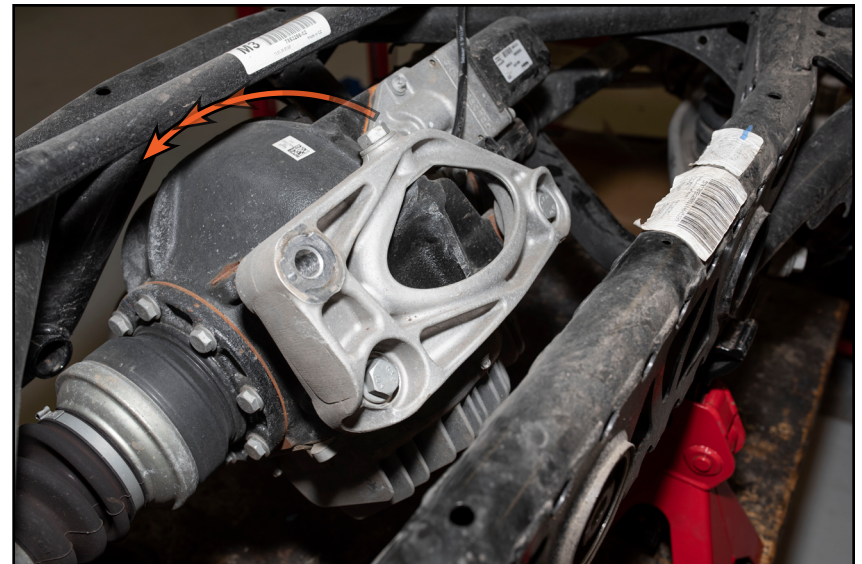
Step 4: 21mm Wrench, 21mm, T30 Torx Socket & Ratchet

Remove the vibration dampener (inset photo), then remove the nut (arrow) and remove the rear differential bolt.



Step 5:

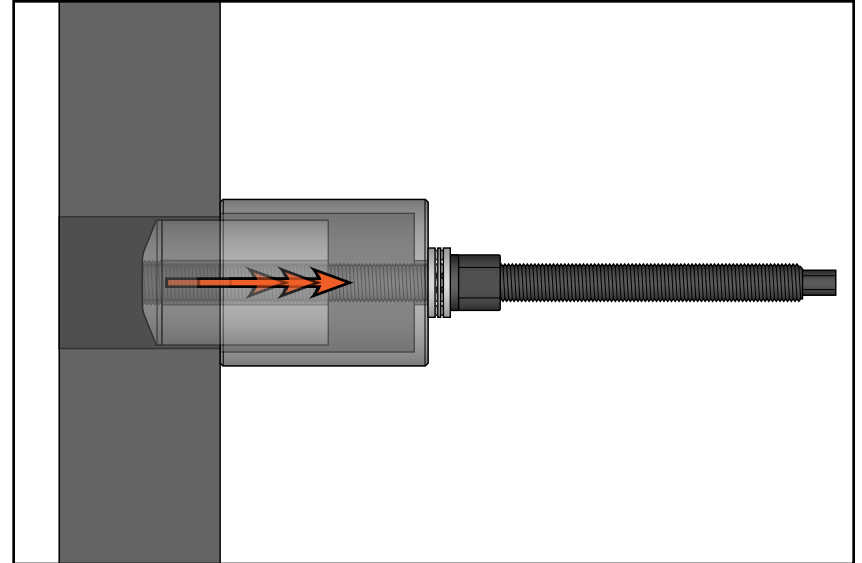
Pivot the differential forward as shown to gain access to the rear differential bushing.



REPLACING THE REAR DIFFERENTIAL BUSHINGS

Step 6:

Using a bushing press tool (available [HERE](#)), press the old bushings out of the rear subframe and front mounting plate.



Step 7:

Clean the bushing bores in the front mounting plate and rear subframe to remove any debris or remaining bushing material.



REPLACING THE REAR DIFFERENTIAL BUSHINGS

Step 8:

Using a bushing press tool, press the new inner bushings into the front mounting plate from back-to-front as shown.



Step 9:

Press the new poly outer bushings into the front mounting plate from back-to-front as shown.



REPLACING THE REAR DIFFERENTIAL BUSHINGS

Step 10:

Apply the included poly lubricant to the new outer bushing sleeves and press them into the new outer bushings from back-to-front as shown.



Step 11:

Press the new bushing halves into the rear differential bushing bore in the rear subframe as shown.



This install was conducted on a vehicle equipped with our dual-mount differential plate, which utilizes both bushing bores in the rear subframe. If your vehicle is equipped with the stock differential plate, you will only install a bushing in the LH bushing bore.



REPLACING THE REAR DIFFERENTIAL BUSHINGS

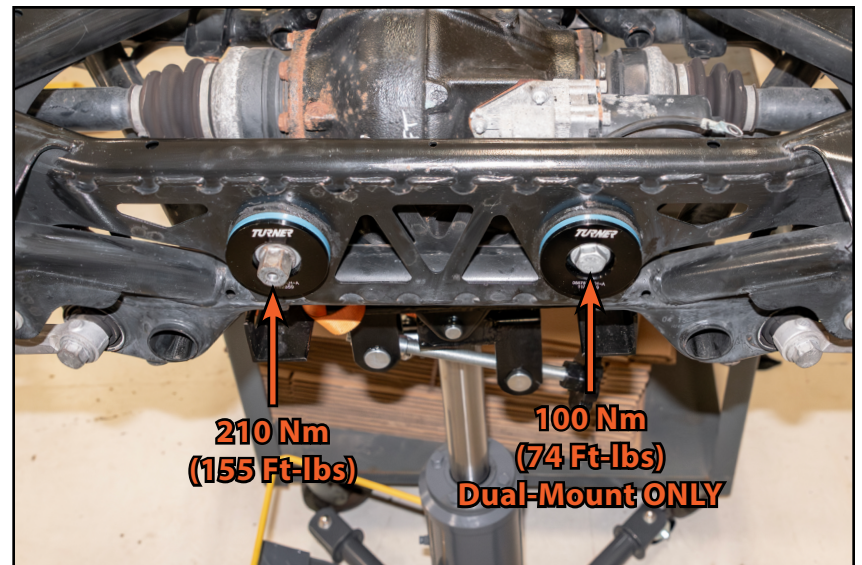
Step 12:

Apply the included poly lubricant to the new rear bushing sleeves and press them into the new rear bushings from back-to-front as shown.



Step 13: 21mm Wrench, 21mm Socket & Torque Wrench

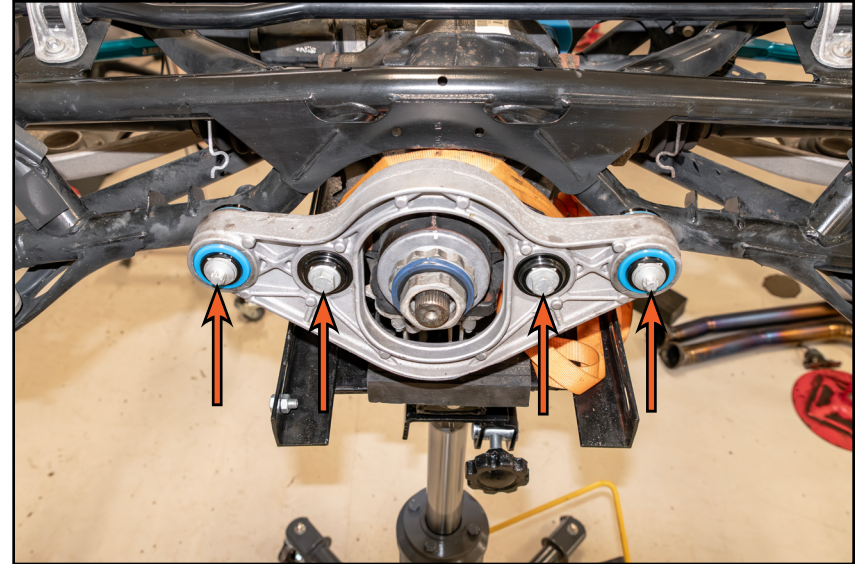
Lift the differential back into place, then replace the rear differential bolts (arrows) and nut, torquing them to 210 Nm (155 Ft-lbs) (100 Nm (74 Ft-lbs) for dual-mount differential bolt)



REPLACING THE REAR DIFFERENTIAL BUSHINGS

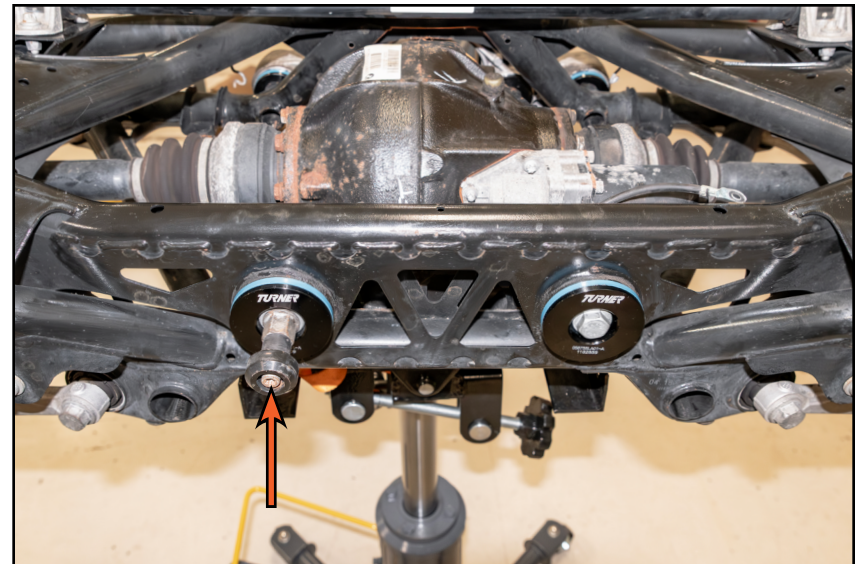
Step 14: 18mm, E14 Torx Socket & Torque Wrench

Reinstall the front mounting plate and replace the bolts (arrows), torquing them to 120 Nm (89 Ft-lbs).



Step 15: T30 Torx Socket & Torque Wrench

Reinstall the vibration dampener and torque the screw (arrow) to 19 Nm (14 Ft-lbs).



REPLACING THE REAR DIFFERENTIAL BUSHINGS

Step 16:

Reinstall the subframe in reverse order of removal, torquing the hardware to:

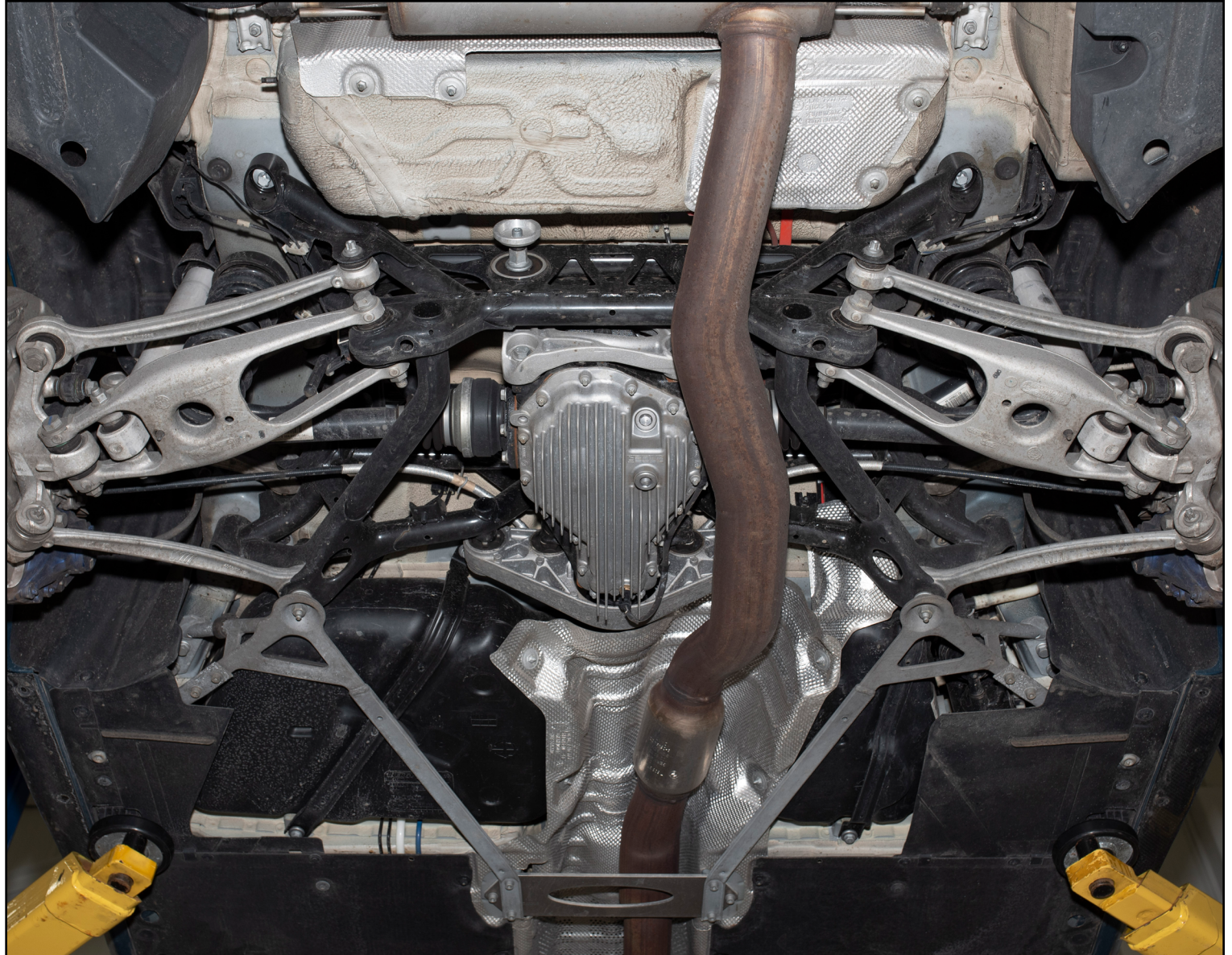
Subframe bolts: 108 Nm
(80 Ft-lbs)

Driveshaft nut: 120 Nm
(89 Ft-lbs)

Lower shock bolts and
nuts: 120 Nm (89 Ft-lbs)
at ride height

Test the parking brake
and adjust if needed,
then perform a 4-wheel
alignment.

***Congratulations,
Your installation
is complete!***



Your Rear Differential Bushing Kit installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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