



FORD PERFORMANCE
RACING PARTS

Part Number: M-4425-M
MUSTANG REAR DIFFERENTIAL TO SUB-FRAME BUSHING KIT
INSTALLATION INSTRUCTIONS

Please visit www.fordracingparts.com for the most current instruction information

!!! PLEASE READ ALL OF THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION.

AT ANY TIME YOU DO NOT UNDERSTAND THE INSTRUCTIONS, PLEASE CALL THE FORD RACING TECHLINE AT 1-800-367-3788!!!

OVERVIEW:

The use of a floor hoist is recommended for this installation. If you do not have access to one, use a hydraulic floor jack and jack stands to raise the vehicle.
Freezing New Bushings overnight will ease installation.

!! CAUTION: JACK STANDS MUST BE USED ON A LEVEL SURFACE AND BE SECURELY SEATED. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR VEHICLE DAMAGE!!!

KIT INCLUDES:

<u>Qty:</u>	<u>Description</u>
2	Front Diff threaded bushing
2	Front Diff through hole bushing
4	Delrin split front bolt slims
2	Rear Diff bushing sleeves
2	Delrin inner bushing
2	Steel through pin
2	Inside snap rings
2	Outside snap rings
1	Loctite 680



Factory Ford shop manuals are available from Helm Publications, 1-800-782-4356



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1. Disconnect Battery.
2. Safely lift and support vehicle.
3. Remove rear wheels.

Muffler and Tailpipe

V-6 and V-8 shown, Ecoboost 4 cylinder is single

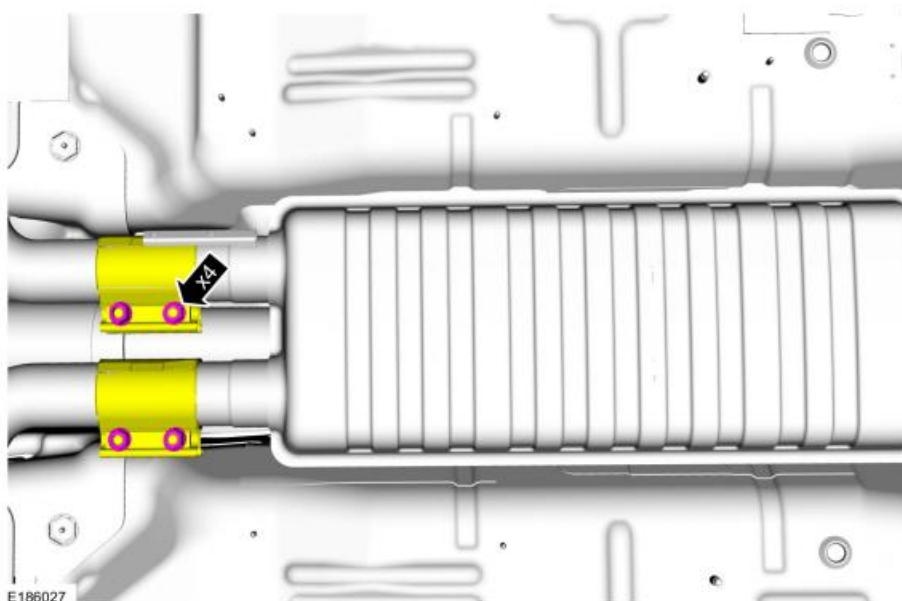
Removal

NOTE: Do not excessively bend, twist or allow the exhaust to hang from the flexible joint or damage to the exhaust system may occur.

NOTE: Do not use oil or grease-based lubricants on the isolators. They may cause deterioration of the rubber.

NOTE: Removal steps in this procedure may contain installation details.

1. With the vehicle in NEUTRAL, position it on a hoist.
2. Loosen the clamps and separate the muffler and tailpipe from the RH catalytic converter and LH muffler inlet pipe.
Torque: 35 lb.ft (48 Nm)



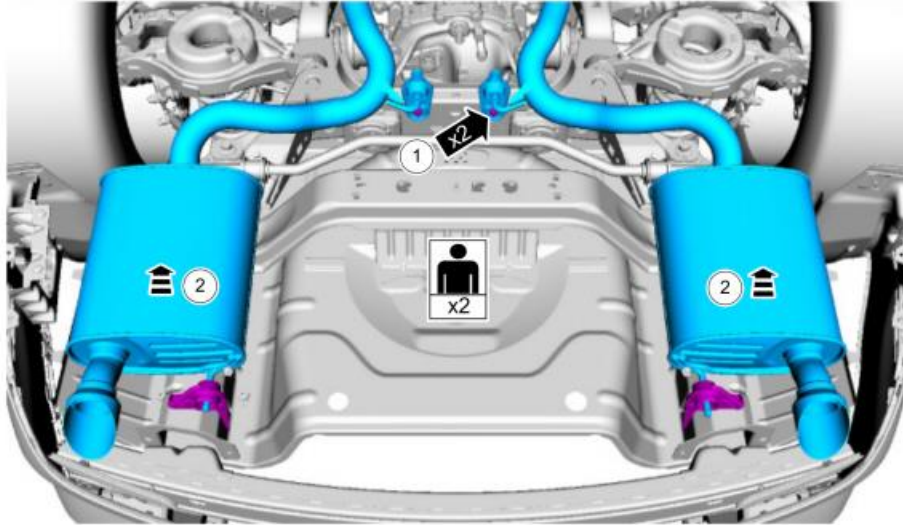
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3.
 1. Remove the LH and RH rear exhaust hanger isolator bracket bolts from the rear sub-frame.
Torque: 18 lb.ft (25 Nm)
 2. Unhook the rear exhaust hanger isolators and remove the muffler and tailpipe.



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Installation

To install, reverse the removal procedure.

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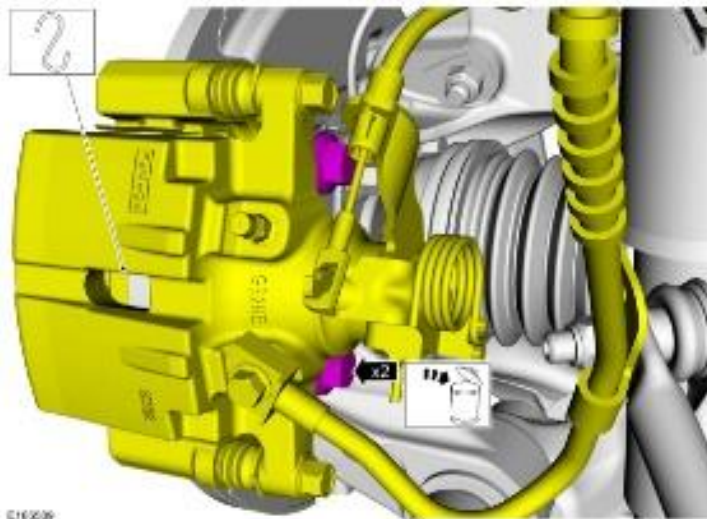
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Brake Disc

NOTICE: Do not allow the brake caliper and anchor plate assembly to hang from the brake hose or damage to the hose may occur.

4. Remove the 2 bolts and position the brake caliper and anchor plate assembly aside.

Torque: 129 lb.ft (175 Nm)



5. Remove the brake disc.



Installation

To install, reverse the removal procedure

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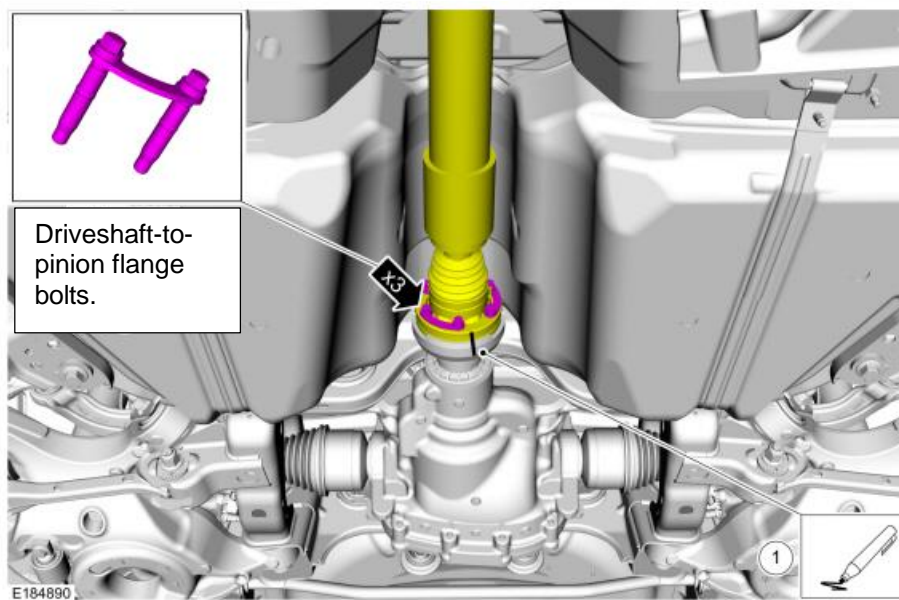
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Rear Sub-frame

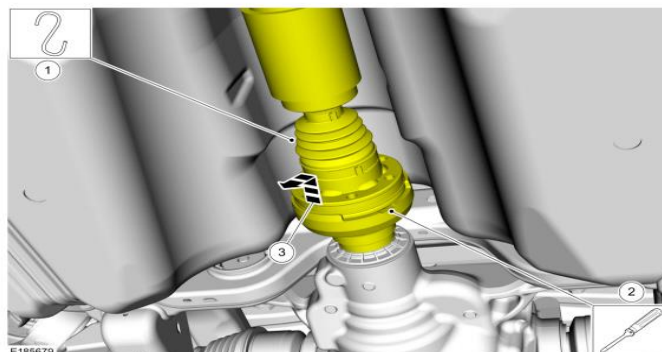
Removal

NOTICE: Suspension fasteners are critical parts that affect the performance of vital components and systems. Failure of these fasteners may result in major service expense. Use the same or equivalent parts if replacement is necessary. Do not use a replacement part of lesser quality or substitute design. Tighten fasteners as specified.

- 6.
1. Index mark the driveshaft and the pinion flange for reference during installation.
2. Remove the driveshaft-to-pinion flange bolts. *Torque:* 41 lb.ft (55 Nm)



7. **NOTICE:** Do not remove driveshaft from the pinion flange by pulling on the driveshaft tube. Damage to the CV-joint can result.
1. Support the driveshaft.
2. Using a screwdriver inserted into the slot on the pinion flange, pry the driveshaft from the pinion flange.
3. Separate the driveshaft from the pinion flange.



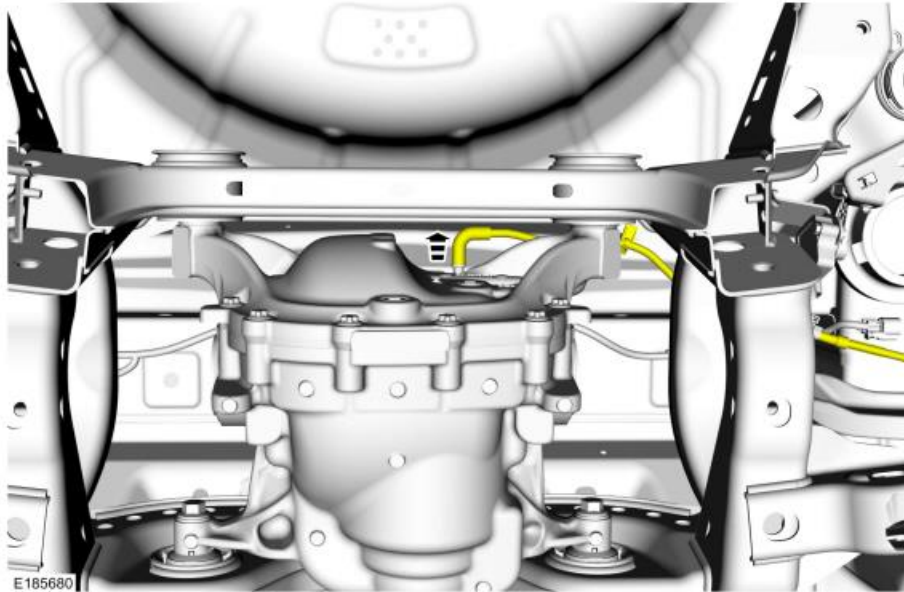
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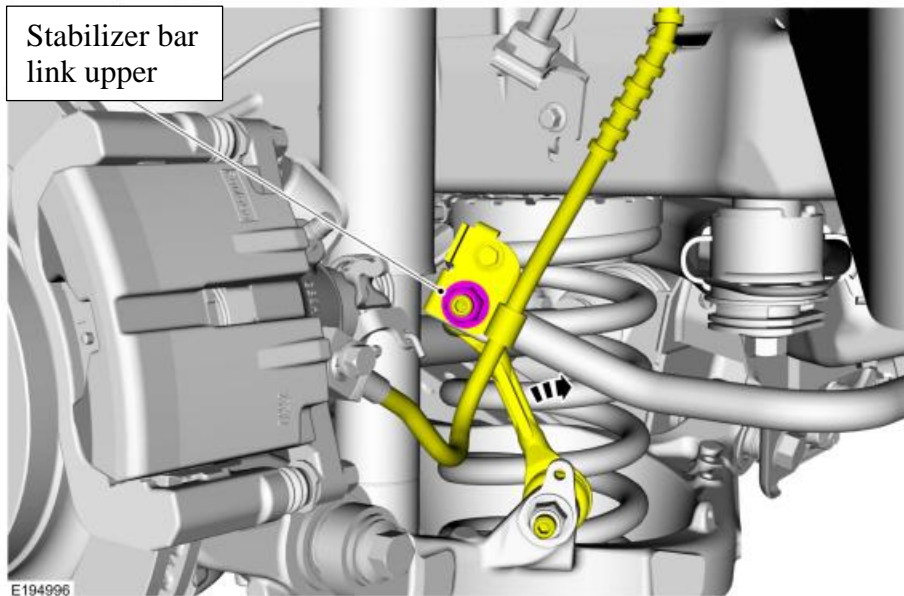
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8. Disconnect the differential vent tube.



9. On both sides.

Remove the stabilizer bar link upper nut and position the stabilizer bar link aside. *Torque: 85 lb.ft (115 Nm)*



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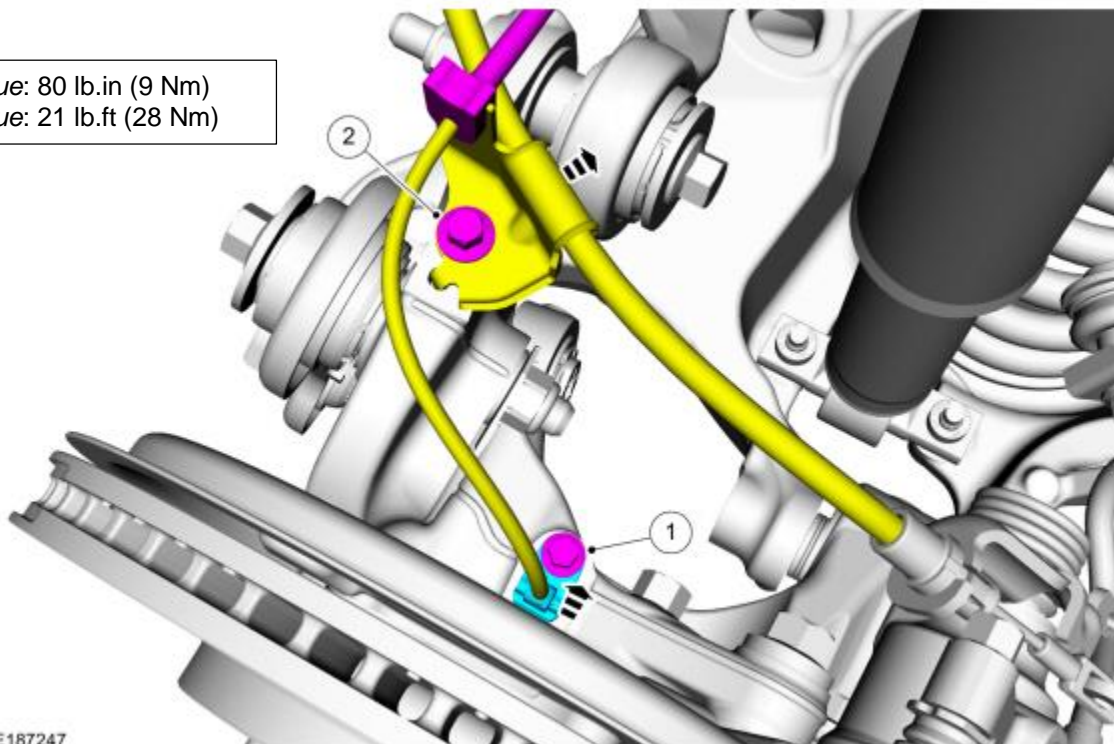


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10. Remove both wheel speed sensors bolts (1) and E-brake bracket bolts (2).

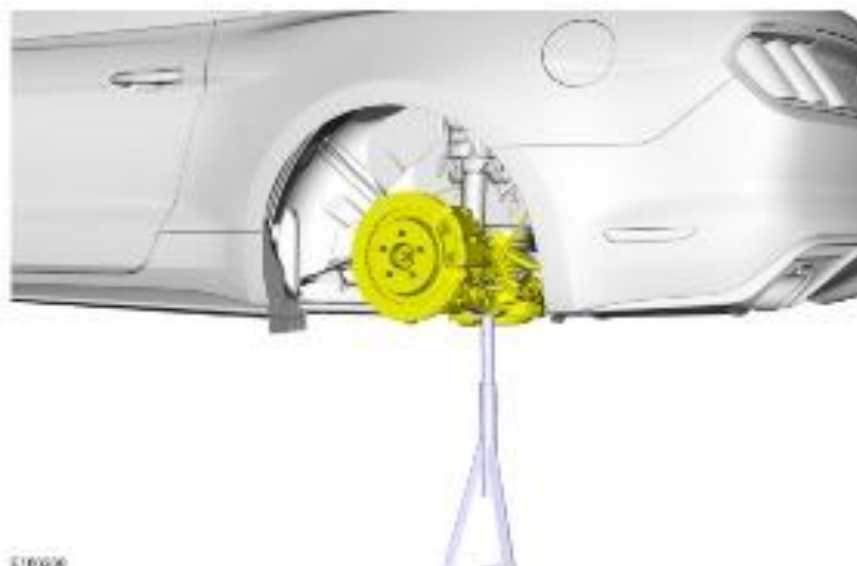
- 1. Torque: 80 lb.in (9 Nm)
- 2. Torque: 21 lb.ft (28 Nm)



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Lower Arm / Coil Spring

11. Support the suspension at curb height.
Use the General Equipment: Vehicle/Axle Stands



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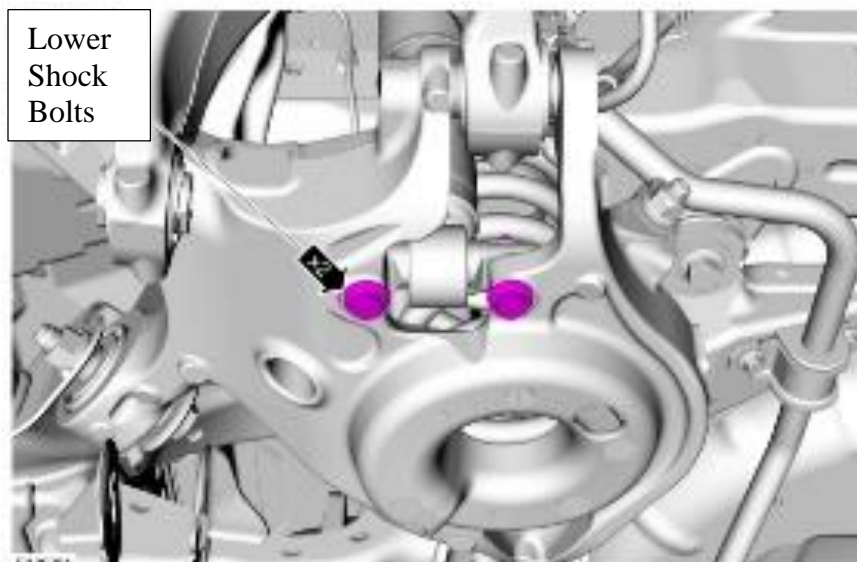
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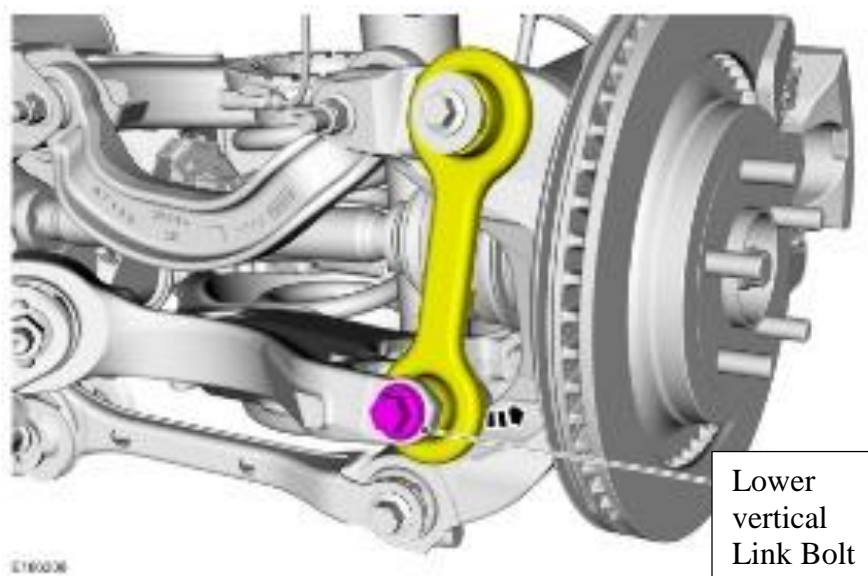
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12. Remove the 2 lower shock absorber bolts.
Torque: 35 lb.ft (48 Nm)



13. Remove the lower arm vertical link lower bolt and position the lower arm vertical link aside.
Torque: 129 lb.ft (175 Nm)



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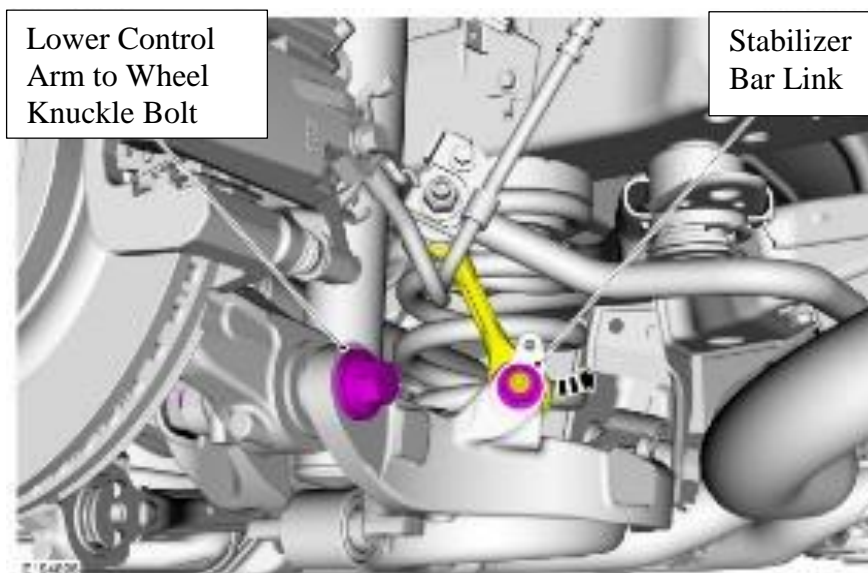
14. **NOTE:** The stabilizer bar links are designed with low friction ball joints that have a low breakaway torque.

NOTE: Use the hex-holding feature to prevent the ball stud from turning while removing the stabilizer bar link nut.

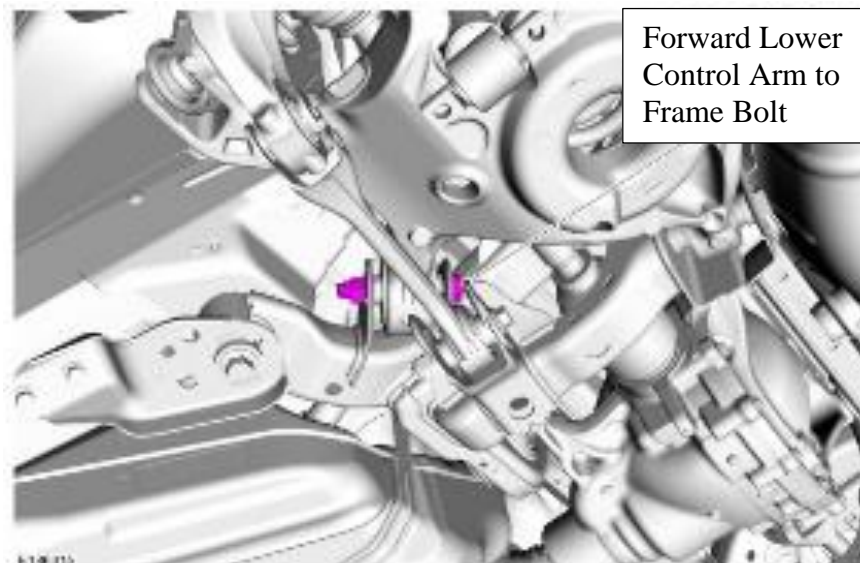
Remove the stabilizer bar link lower nut and position the stabilizer bar link aside. *Torque:* 85 lb.ft (115 Nm)

Remove the lower control arm-to-wheel knuckle bolt. *Torque:* 166 lb.ft (225 Nm)

Remove axle shaft nut.



15. Remove the forward lower control arm-to-frame bolt. *Torque:* 166 lb.ft (225 Nm)



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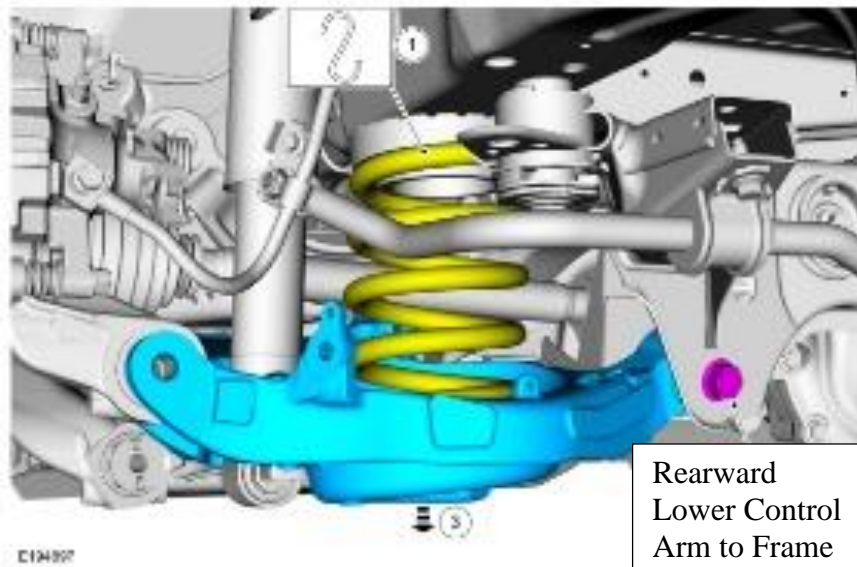
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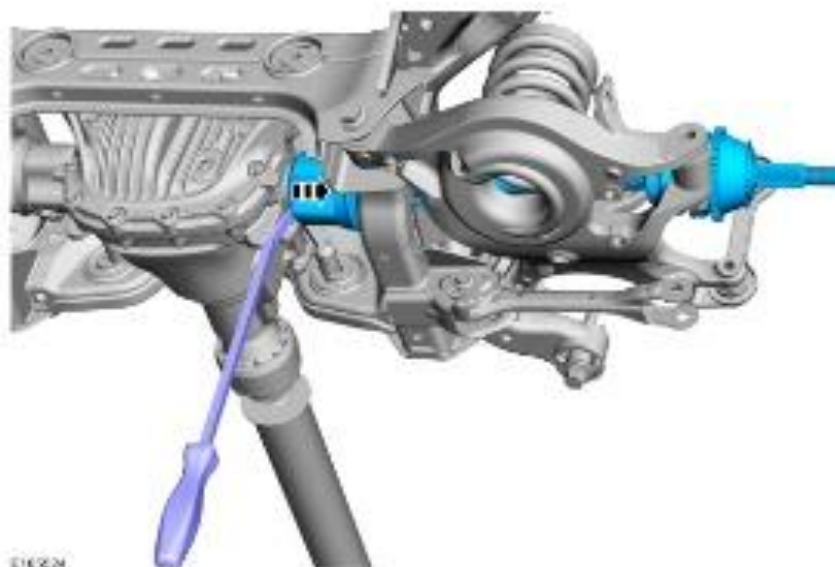
16. Support the coil spring.

Remove the rearward lower control arm-to-frame bolt. *Torque: 184 lb.ft (250 Nm)*

Remove the lower control arm.



17. Using a pry bar, remove the half shaft. Use care not to damage seal.



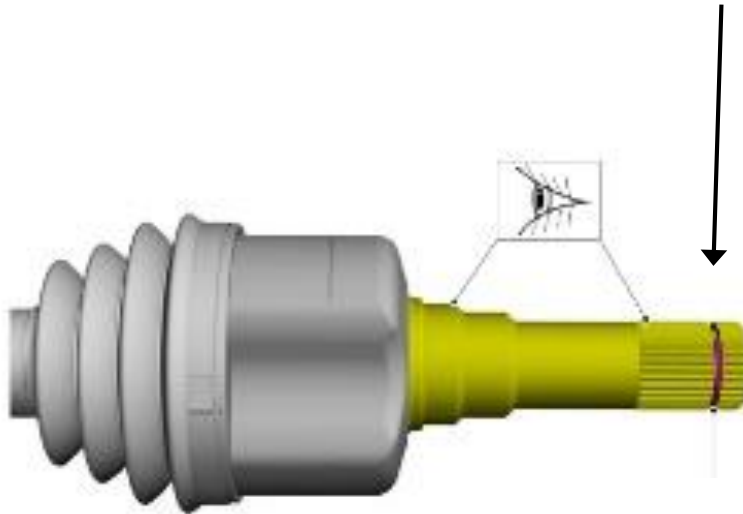
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18. Inspect the inner halfshaft seal surface and splines for damage. Ensure clip is still in place.



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19. Position a floor jack under the rear sub-frame.



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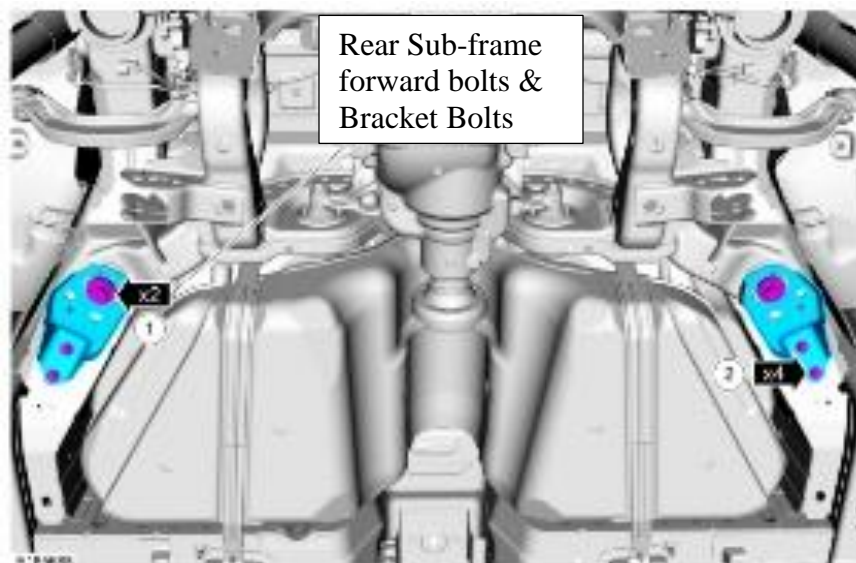


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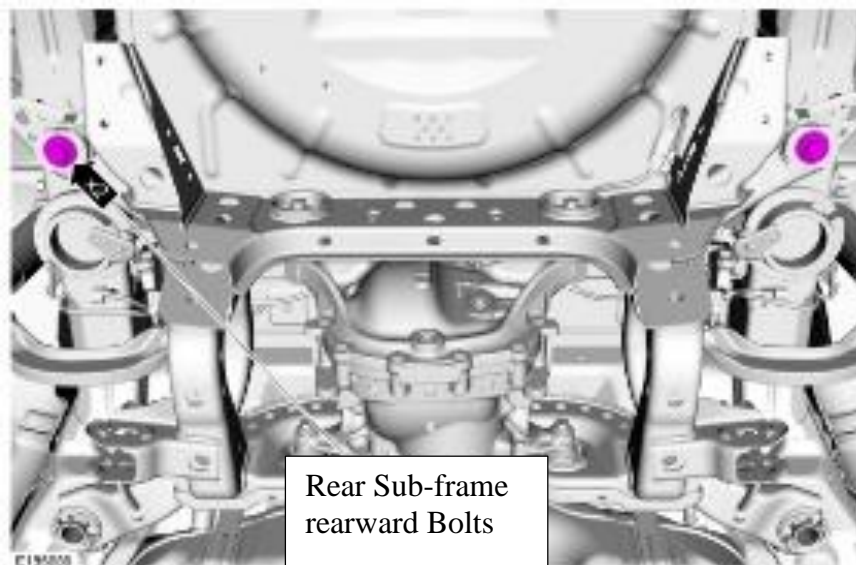
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20. Remove the 2 rear sub-frame forward bolts. *Torque*: 129 lb.ft (175 Nm)

Remove the 4 rear sub-frame bracket bolts and remove the brackets. *Torque*: 41 lb.ft (55 Nm)



21. Remove the 2 rear sub-frame rearward bolts. *Torque*: 129 lb.ft (175 Nm)



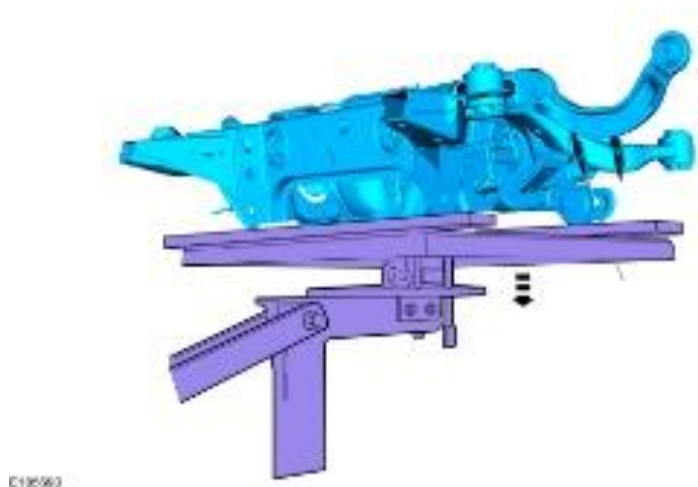
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22. Using the floor jack, lower the rear sub-frame from the vehicle.



23. With sub-frame lowered remove the 4 bolts that hold the rear differential. With the help of a assistant lift the sub-frame off on the differential.
24. With the frame out of the vehicle, remove the four (4) Differential Mount Bushings. Cut the rubber out of the Center then score the outer sleeve. Now tap the sleeve out with a hammer. Care must be taken not to cut into the sub frame.

Note: It is necessary to modify a Reciprocating Saw Blade (see fig. below)

**Modify
Reciprocating
Saw Blade**



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**Cut the
rubber out
of the
Center**



**Remove
Center
Rubber**



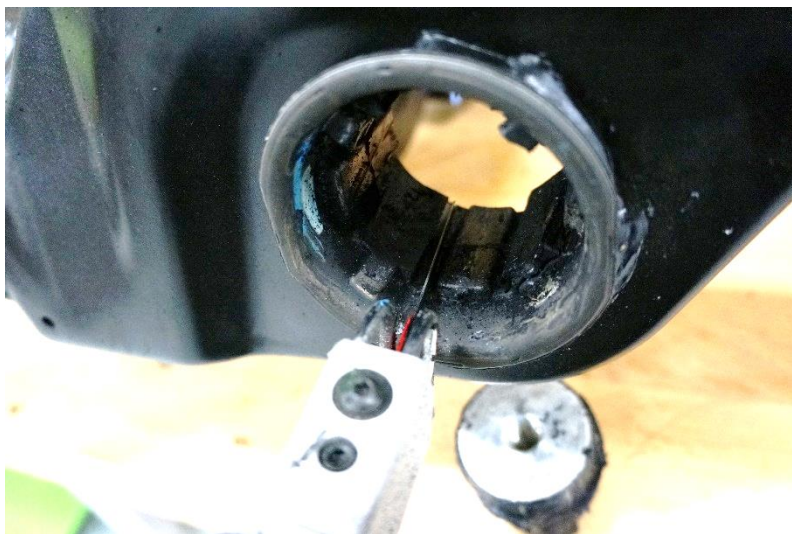
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**Score the
outer sleeve,
Do not saw
Through
Sleeve**



**Tap the
sleeve out
with a
hammer**



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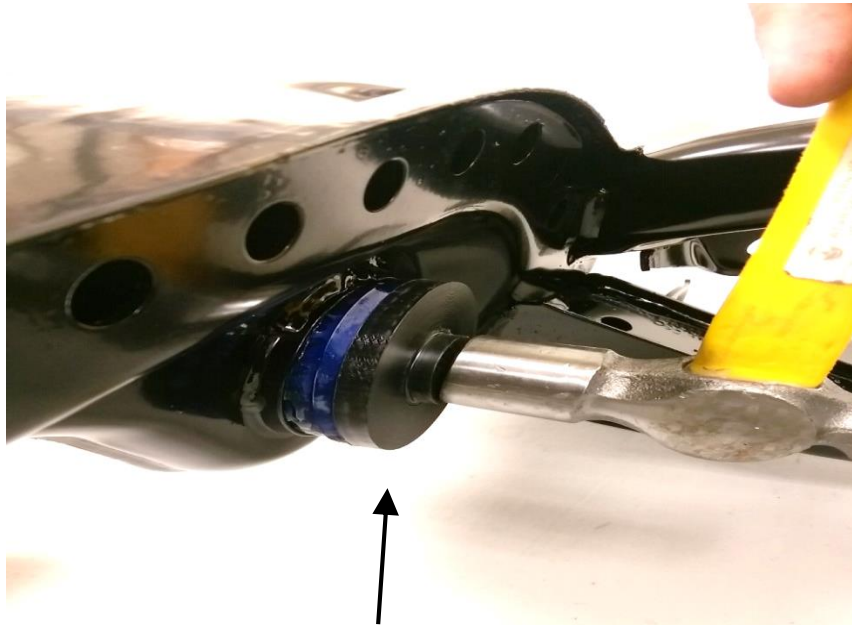


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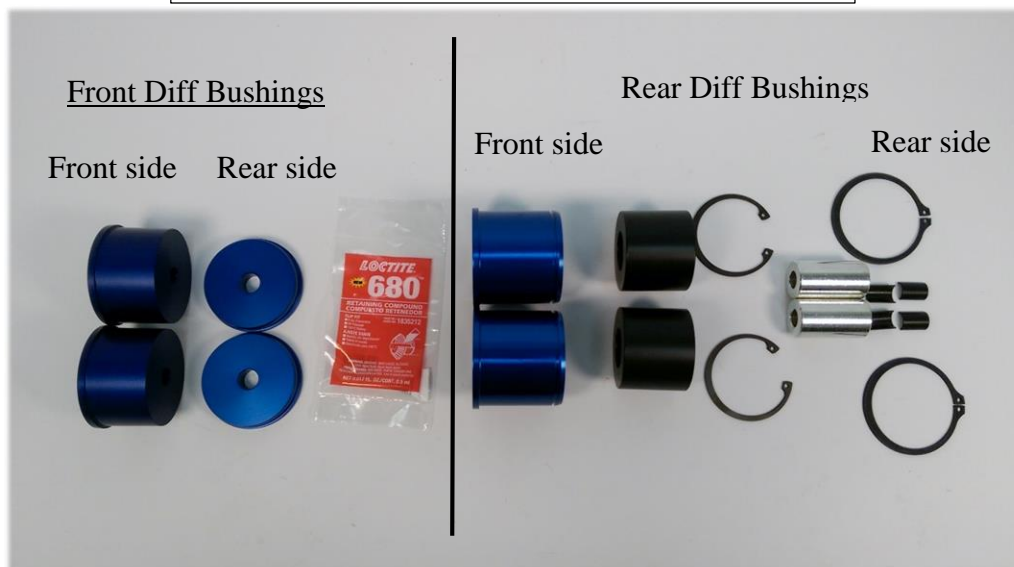
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Bushing Installation

25. Apply green Loctite to the bushing boss on the frame. Now install the 2 piece bushing, using a hammer. Use care not to damage surface. Repeat on all other bushings.



Plastic puck used so surface doesn't get damage.
You can use a dead blow hammer or a piece of wood if necessary.

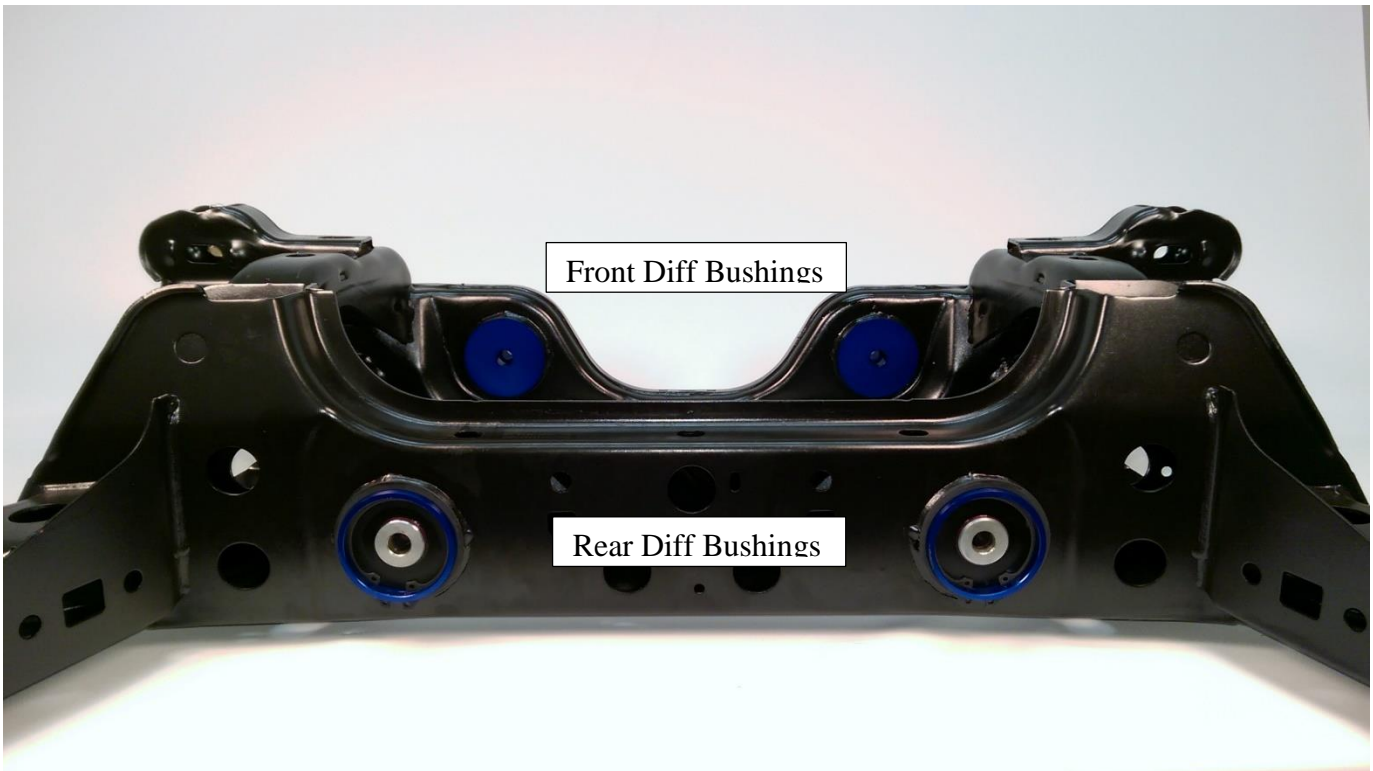


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26. Once you have all the bushings installed, Reinstalled the rear differential.
To install reverse removal procedure. Torque all bolt see list below.

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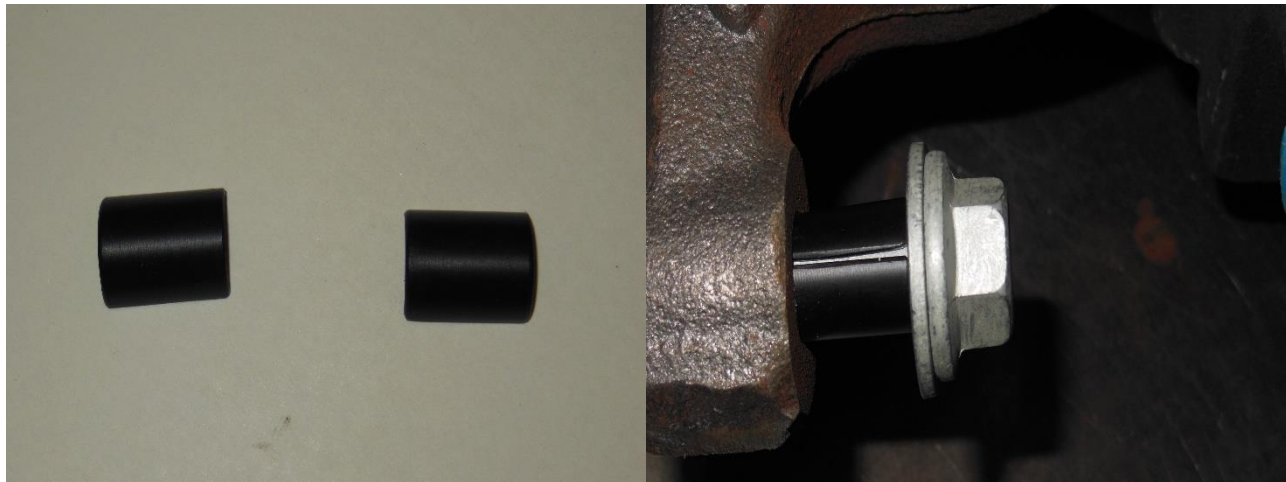
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Rear Differential Installation

NOTICE: When installing the differential ensure that the steel sleeves in the rear differential bushing are flush with the Delrin surround. If not, lightly tap them flush to assist in installation.

- Mount the rear or the differential first, hand start both bolts only at this time.
- Install the front bolts, hand start only at this time. Now you will need to install the supplied split plastic shims between the bolt head and the differential. These shims are to ensure a tight fit around the bolt and the differential. Begin tightening the front bolts to ensure the shims are pressed in by the head of the bolt.
- Tighten all 4 differential bolt to 175.0 +/- 26.3 Nm.



NOTICE: Suspension fasteners are critical parts that affect the performance of vital components and systems. Failure of these fasteners may result in major service expense. Use the same or equivalent parts if replacement is necessary. Do not use a replacement part of lesser quality or substitute design. Tighten fasteners as specified.

NOTICE: Tighten the suspension bushing fasteners with the suspension loaded or with the weight of the vehicle resting on the wheels and tires, otherwise incorrect clamp load and bushing damage may occur.

NOTICE: Check and if necessary, adjust rear alignment.

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Note: Apply blue Loctite to all remove fasteners before reinstalling.

Rear differential 175.0 -/+ 26.3 Nm

Axle nut 133.0 Nm +45deg

E brake cable bracket 27.5 -/+ 4.2 Nm

Wheel sensor bolt 9.0 -/+ 1.4 Nm

Wheel bearing bolts 133.0 -/+ 20.0 Nm

Brake caliper mounting bolts 175 -/+ 26.3 Nm

Lower control arm bolts outer 175 -/+ 26.3 Nm

Lower control arm bolts inner 250 -/+ 37.5 Nm

Lower shock bolts 47.5 -/+ 7.2 Nm

Sway bar u bracket 70.0 -/+ 10.5 Nm

Sway bar link 115 -/+ 17.5 Nm

Sub frame mounting bolts 21mm heads 175 -/+ 26.3 Nm

Sub frame mounting bolts 13 mm heads 55 -/+ 7.2 Nm

Driveshaft-to-pinion flange bolts 55 -/+ 7.2 Nm

Sub-frame bracket bolts. 55 -/+ 7.2 Nm

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