FORD PERFORMANCE

M-18000-BSL
2021 Bronco Sport
Badlands Suspension Kit

PRIOR TO INSTALLATION READ THESE INSTRUCTION COMPLETELY
For questions, Call the FORD PERFORMANCE Techline 1-800-367-3788

Please visit https://www.performanceparts.ford.com for warranty information

PART NUMBER	DESCRIPTION	QUANTITY
CCPZ-3B477-B	Rear axle nut	2
CM-18000-BSLFRTLT	Front left strut assembly	1
CM-18000-BSLFRTLT	Front right strut assembly	1
LX6Z-00811-A	Rear control arm nut	2
LX6Z-18125-BJ	Rear shock assembly	2
LX6Z-5482-G	Front sway bar	1
LX6Z-5560-EH	Rear spring	2
LX6Z-5586-B	Antisqueak top spring mount	2
LX6Z-5A772-P	Rear sway bar	1
LX6Z-5A968-J	Rear knuckle	1
LX6Z-5A969-J	Rear knuckle	1
LX6Z-5C486-C	Rear sway bar endlink	2
LX6Z-5K484-E	Front sway bar endlink	2
LX6Z-8321-E	Rear spring pad	2
PC-1801	Packaging material	1

Ford Factory Shop Manual purchase options www.motorcraftservice.com

PRIOR TO INSTALLATION READ THESE INSTRUCTION COMPLETELY
For questions, Call the FORD PERFORMANCE Techline 1-800-367-3788

Please visit https://www.performanceparts.ford.com for warranty information

PART NUMBER	DESCRIPTION	QUANTITY
PC-1801B	Packaging material	2
W500566-S439	Roll restrictor bolt	1
W500725-S439	Right hand subframe bolts	3
W500727-S439	Left hand subframe bolts	3
W520203-S440	Outer tie rod nuts	2
W520515-S442	Lower ball joint nut	2
W520516-S442	Front shock retaining nut	4
W712503-S440	Upper strut piston nut	4
W713199-S442	Reinforcement bracket front subframe top bolts	4
W715682-S900	Rear lower arm I-link nut	2
W718843-S439	Steering shaft bolt	1
W719192-S439	Right hand front subframe bolt	2
W719419-S439	Rear upper knuckle bolt	4
W719460-S439	Front shock bolt	4
W719466-S439	Rear wheel bearing seal encapsulator	2
W719652-S439	Rear knuckle front bolts	4
W719733-S442	Front shock top mounting bolt	6
W719917-S439	Front sway bar bolts	2
W719924-S439	Lower ball joint bolt	2
W720238-S439	Rear strut bottom bolt	2
W720388-S439	Left front subframe bolt	4
W720492-S450	Sway bar fastener	4
W720633-S439	Rear control arm bolts	2
W720710-S439	Rear shock upper bolt	4
W721130-S439	Front cross member bolts	2

INSTALLATION PROCEDURE - Badlands Suspension Kit

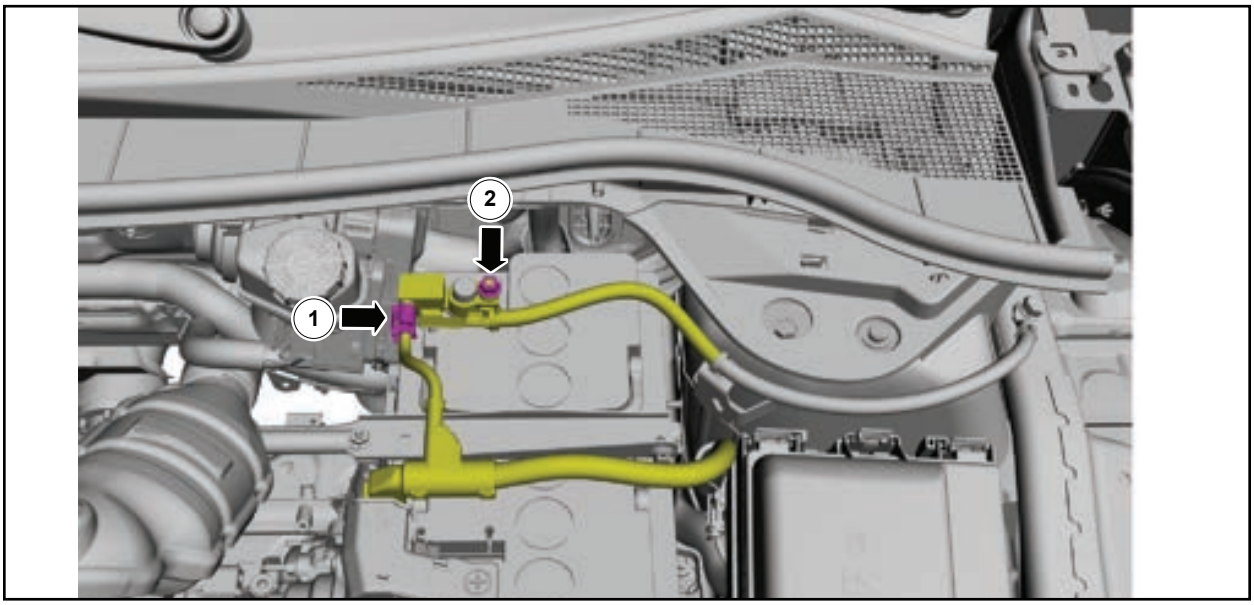
1. Disconnect the battery ground cable.

NOTICE: Be careful not to damage the battery monitoring sensor when removing the terminal from the battery post. Do not pry on the terminals or component damage may occur.

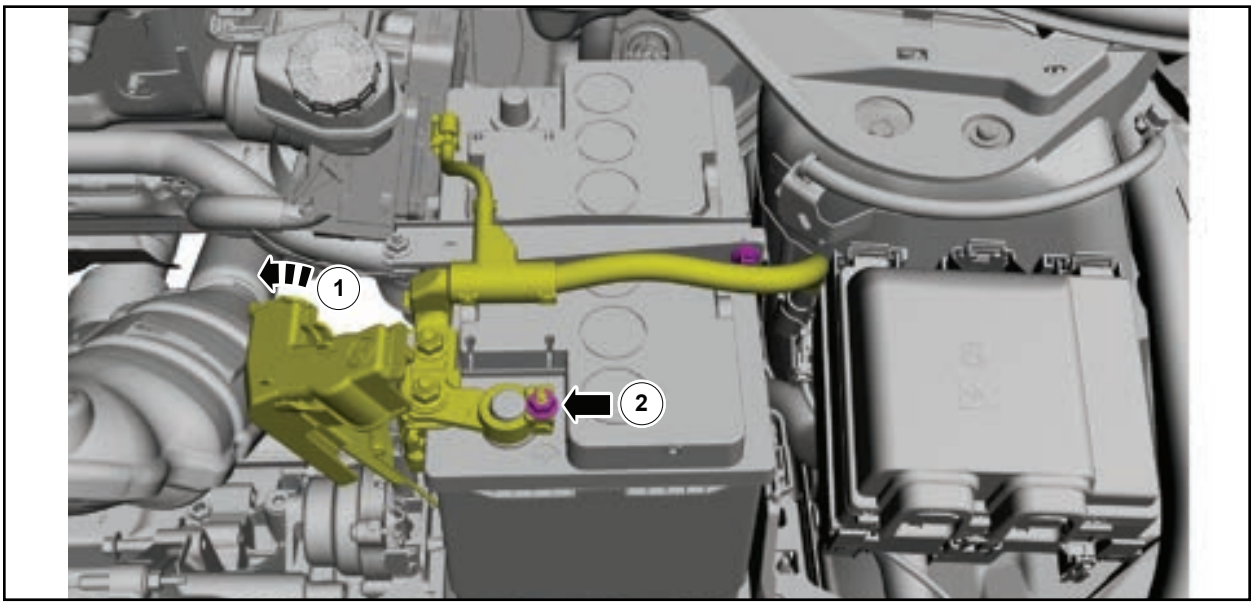
NOTE: When the battery is disconnected and connected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven to allow the PCM to relearn the adaptive strategy values.

NOTE: When disconnecting the battery ground cable to interrupt power to the vehicle electrical system, disconnect the battery ground cable only. It is not necessary to disconnect the positive battery cable.

a. Disconnect the battery monitoring sensor electrical connector. Then, loosen but do not remove the nut and position the negative battery cable aside.



b. Position the positive battery cable terminal cover aside. Then, loosen but do not remove the positive battery cable terminal nut.



2. With the vehicle in NEUTRAL, position it on a hoist.

WARNING: Before raising the vehicle on a hoist, make sure the hoist capacity is adequate for the vehicle weight, including any vehicle cargo or modifications. Always position the hoist lift arms as shown below. Do not use the engine to power the drive wheels unless all drive wheels are elevated off the ground. Incorrect hoist arm positioning or drive wheels in contact with the ground can cause unintended vehicle movement. Failure to follow these instructions may result in serious personal injury or death.

WARNING: Position the hoist lift arms as shown in the illustration. Incorrect positioning could result in vehicle slipping or falling from the hoist. Failure to follow this instruction may result in serious personal injury.

WARNING: Never get underneath a vehicle that is supported only by a jack. The jack could unintentionally lower. Always support vehicle with floor stands. Failure to follow these instructions may result in serious personal injury.

WARNING: Identify the correct jacking points by locating the triangle stamped into the uni-body sheet metal or vehicle frame or molded into the body rocker moulding. Raising a vehicle in any other location may result in vehicle shifting or falling. Failure to follow this instruction may result in serious personal injury.

WARNING: Only raise the vehicle when positioned on a hard, level surface. Attempting to raise the vehicle on an uneven or soft surface may result in vehicle slipping or falling from the jack or jackstand. Failure to follow this instruction may result in serious personal injury.

WARNING: When jacking or lifting the vehicle, block all wheels remaining on the ground. Set the parking brake if the rear wheels will remain on the ground. These actions help prevent unintended vehicle movement. Failure to follow these instructions may result in serious personal injury.

NOTICE: The jack provided with the vehicle is intended to be used in an emergency for changing a deflated tire. To avoid damage to the vehicle, never use the jack to hoist the vehicle for any other purpose.

NOTICE: Do not attempt to jacking on the front bumper or the rear bumper on any vehicle. Damage to bumper covers will occur.

NOTICE: Do not attempt to jacking on the front control arm or rear control arm on any vehicle. Damage to control arms may occur.

NOTICE: Do not use the differential housing as a lift point. Leaks or damage to the rear axle cover and adjoining differential housing surface may occur if a floor jack or any lifting device is allowed to contact the cover at any point where the cover joins the housing.

NOTICE: Place blocks underneath the lifting points if a two-column hoist is used.

NOTICE: Damage to the suspension, exhaust or steering linkage components may occur if care is not exercised when positioning the hoist adapters prior to lifting the vehicle.

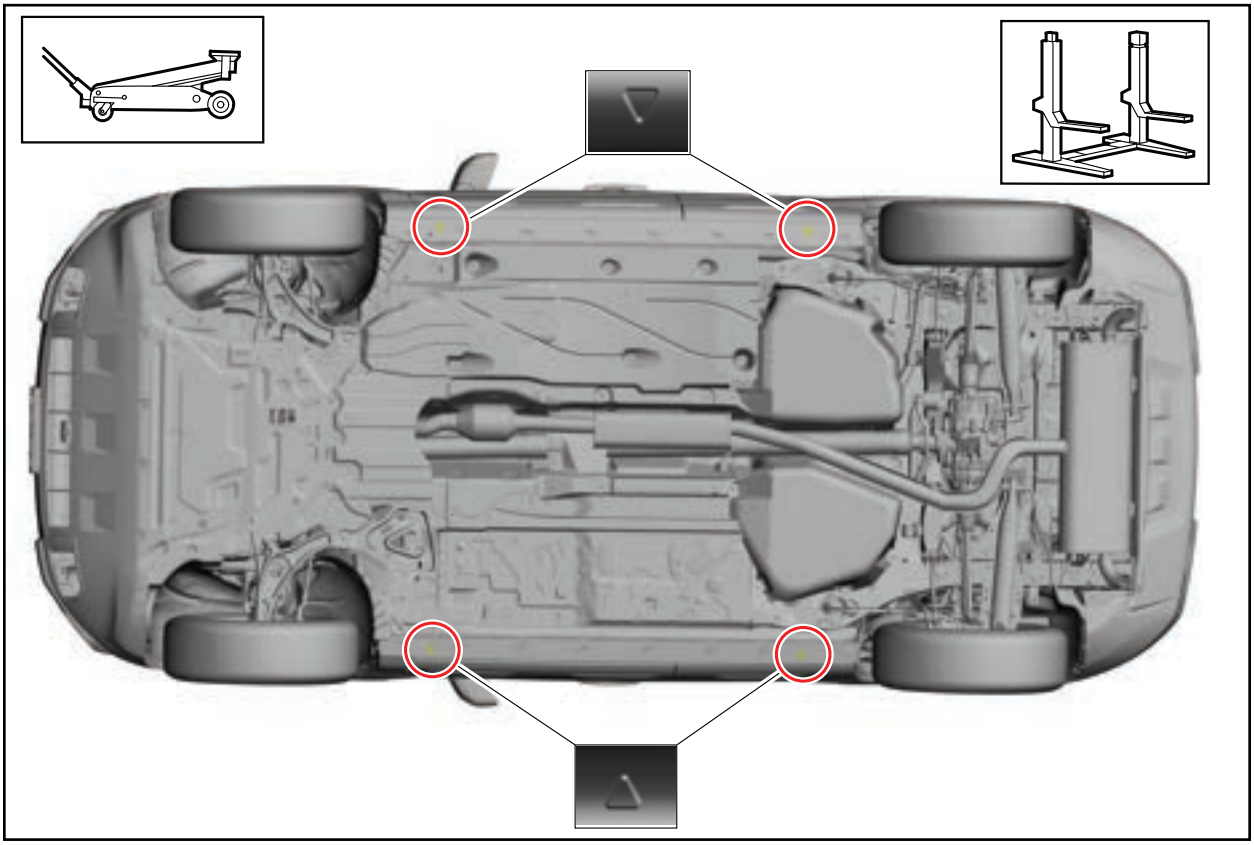
NOTICE: To prevent possible damage to the underbody, do not drive the vehicle onto the drive-on lift without first checking for possible interference.

NOTICE: When raising a vehicle on a two-column hoist, use care when positioning the vehicle so that the hoisting forks do not interfere with suspension components, mounting brackets or stabilizer mounting brackets, if equipped. In addition, use care in hoist positioning to avoid possible damage to the axle or rear cover.

Jacking and Lifting Points

NOTE: Rear wheel drive shown, all-wheel drive similar.

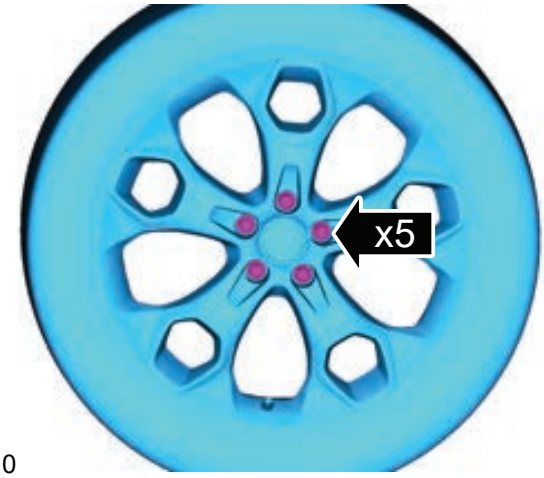
Only the specified jacking points may be used for jacking and supporting the vehicle.



3. Remove the wheel nuts and all four wheels.

NOTICE: Do not use heat to loosen a seized wheel nut or damage to the wheel and wheel bearing can occur.

NOTICE: If equipped with full wheel cover with exposed wheel nuts, the wheel nuts must be removed prior to removing the wheel cover or damage to the wheel cover will occur.



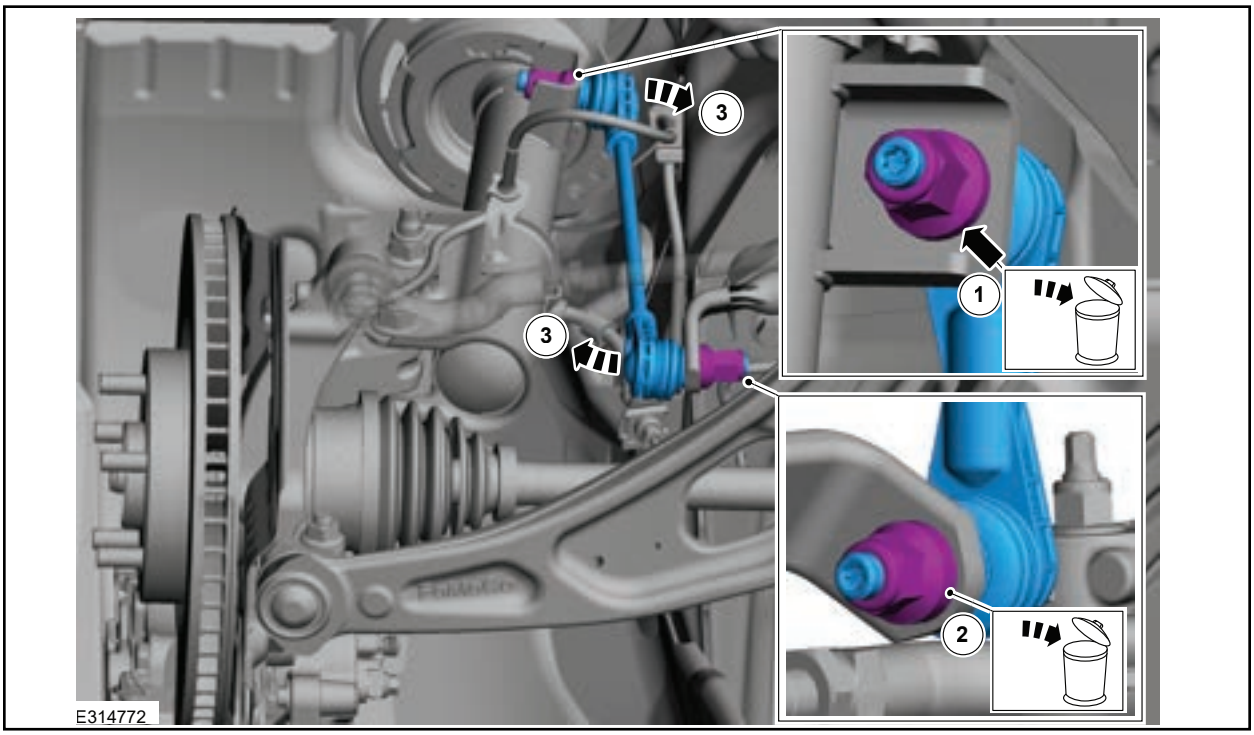
E145710

4. Remove and discard the front stabilizer bar link upper and lower nut, then remove the front stabilizer bar link.

NOTICE: Do not use power tools to remove the stabilizer bar link nut. Damage to the stabilizer bar link ball joint or boot may occur.

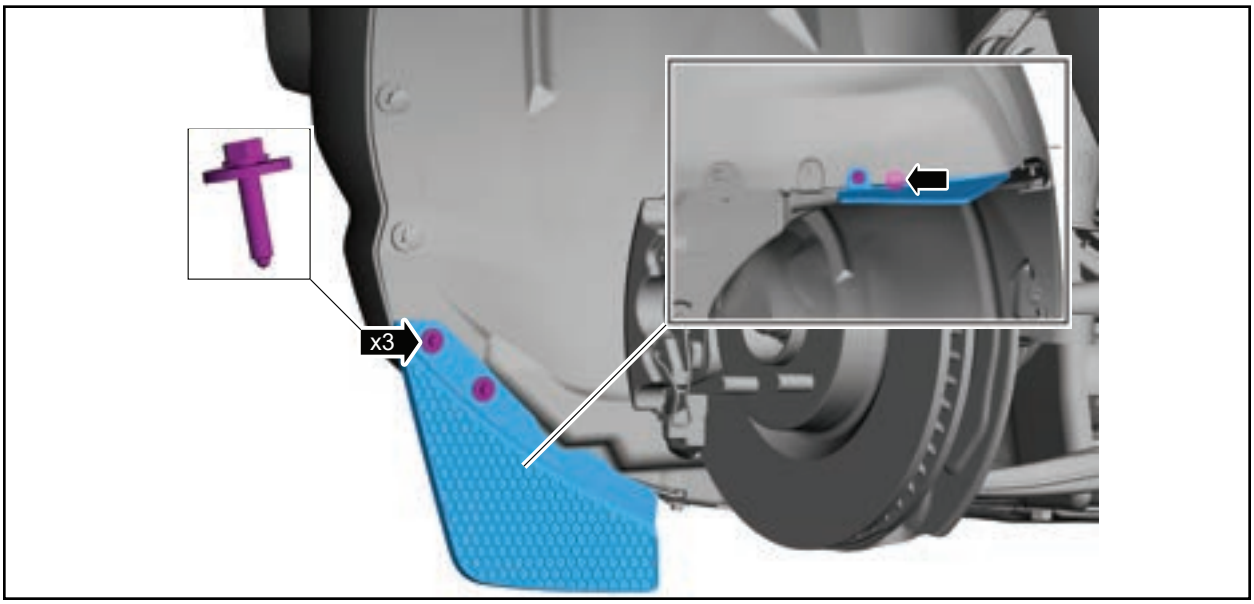
NOTE: The stabilizer bar links are designed with low friction ball joints that have a low breakaway torque.

NOTE: Use the TORX PLUS® holding feature to prevent the ball stud from turning while removing or installing the lower arm outboard nut. Torx® and TORX PLUS® is a reg. tm of Acument Intellectual Properties, LLC.

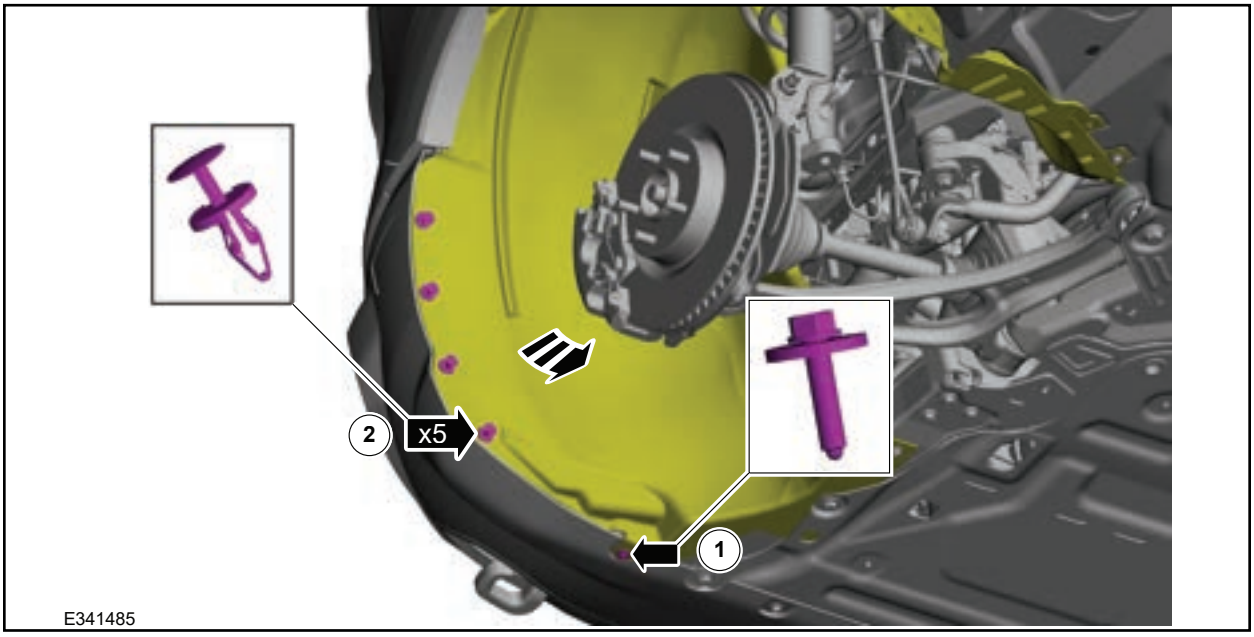


5. Remove the front bumper cover.

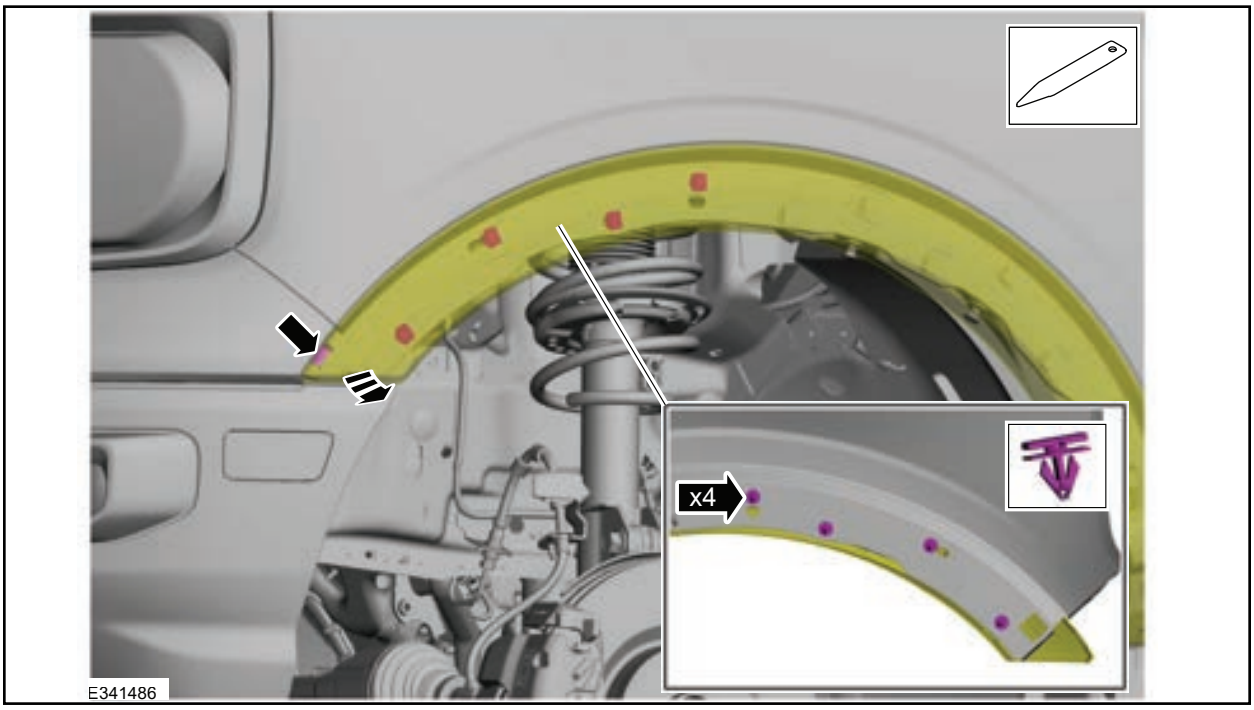
a. If equipped, remove the screws, release the tab and remove the stone deflector on both sides.



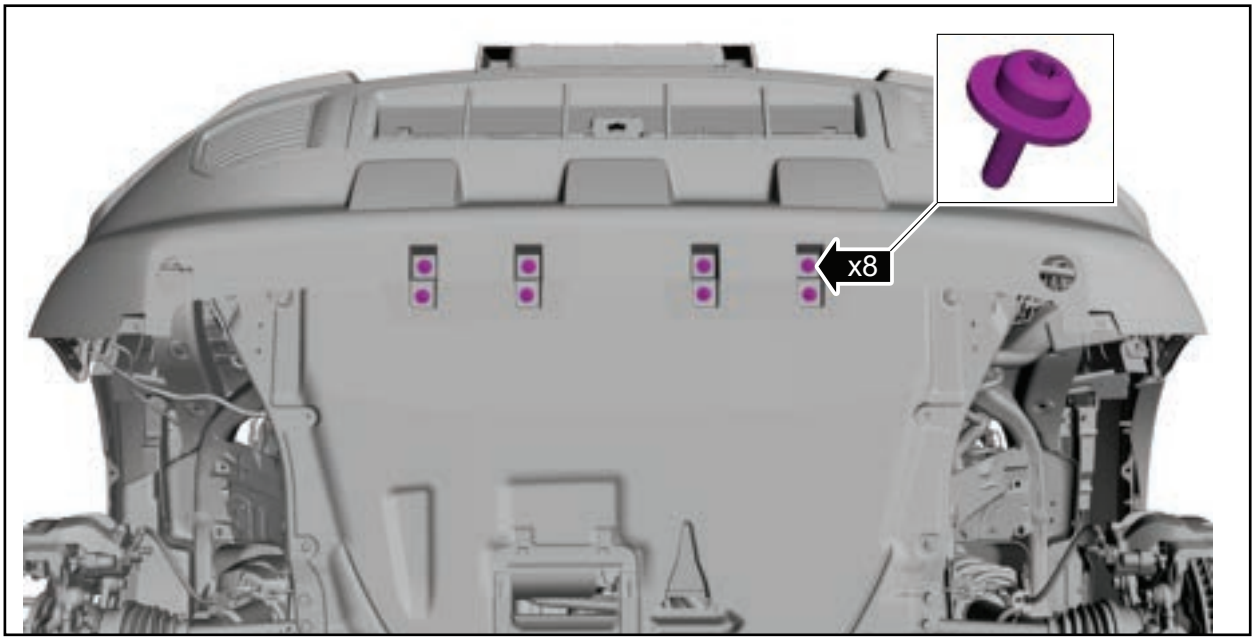
b. If equipped, remove the screw, then remove the push pins and position the fender liner aside on both sides.



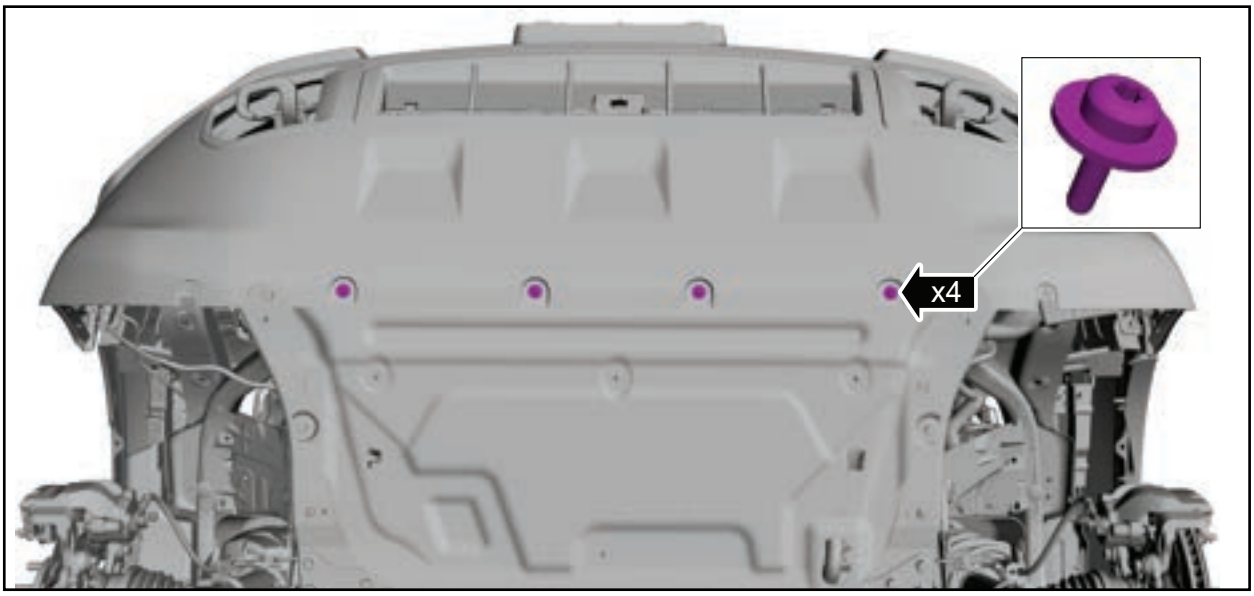
c. On both sides, release the clips and position the front fender moulding aside.
Use the General Equipment: Interior Trim Remover



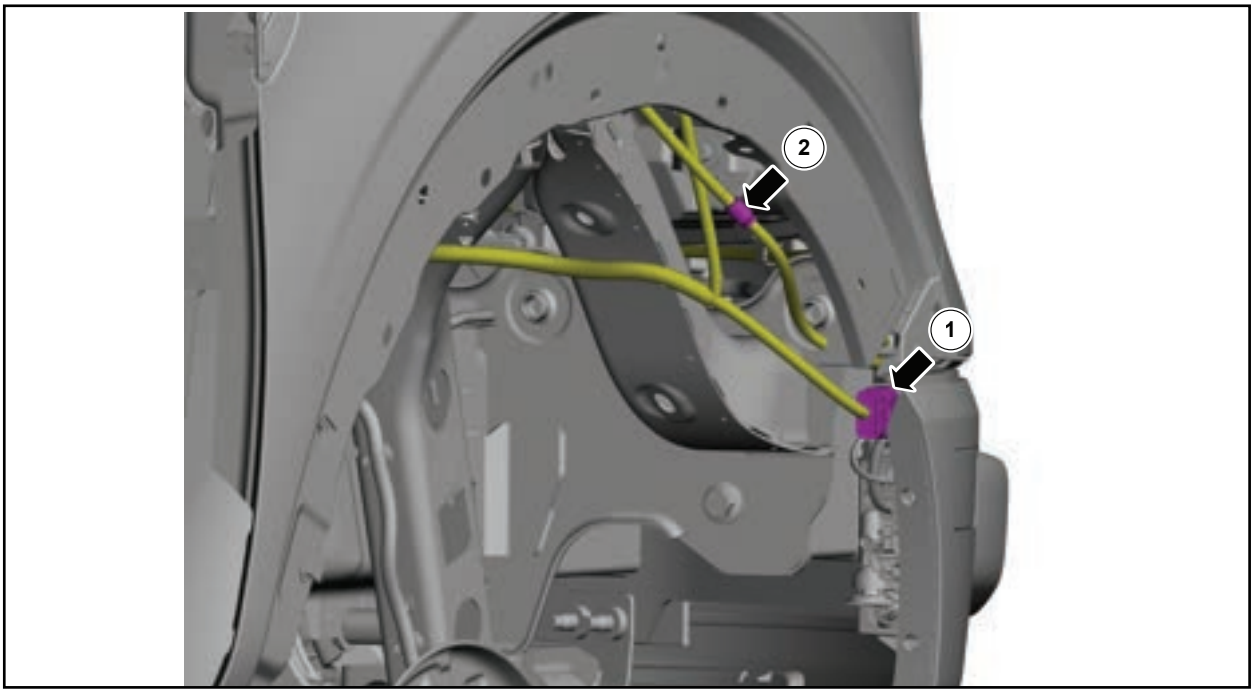
d. Remove the screws.



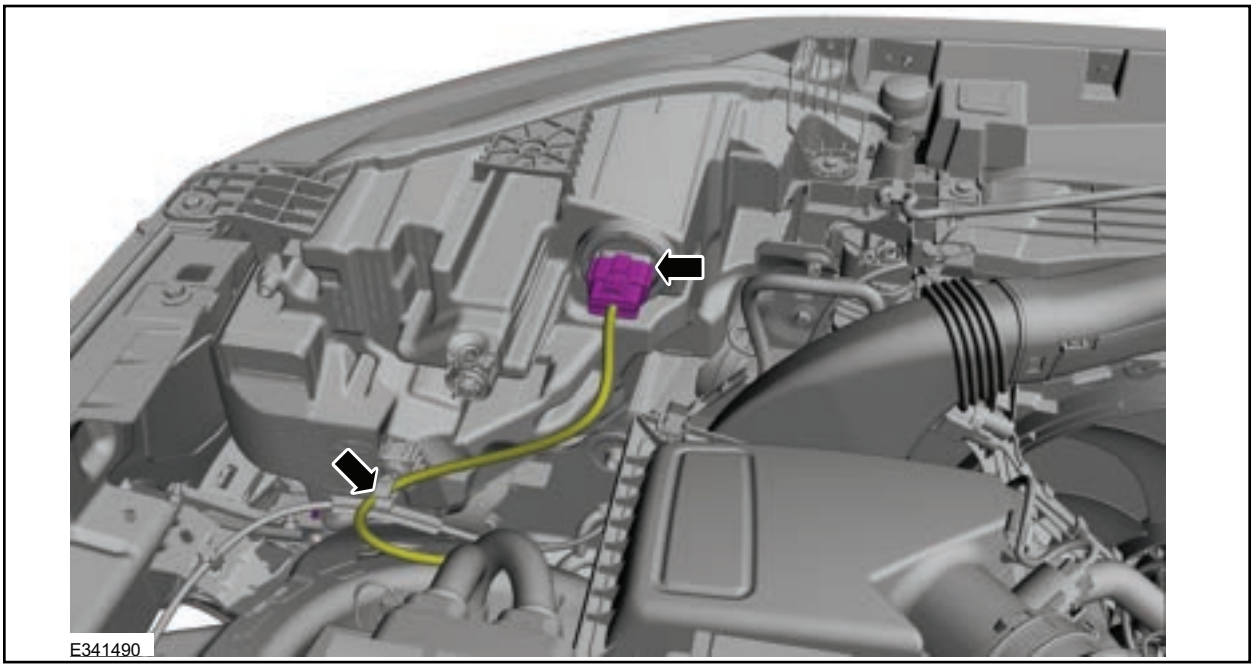
e. If equipped, remove the screws.



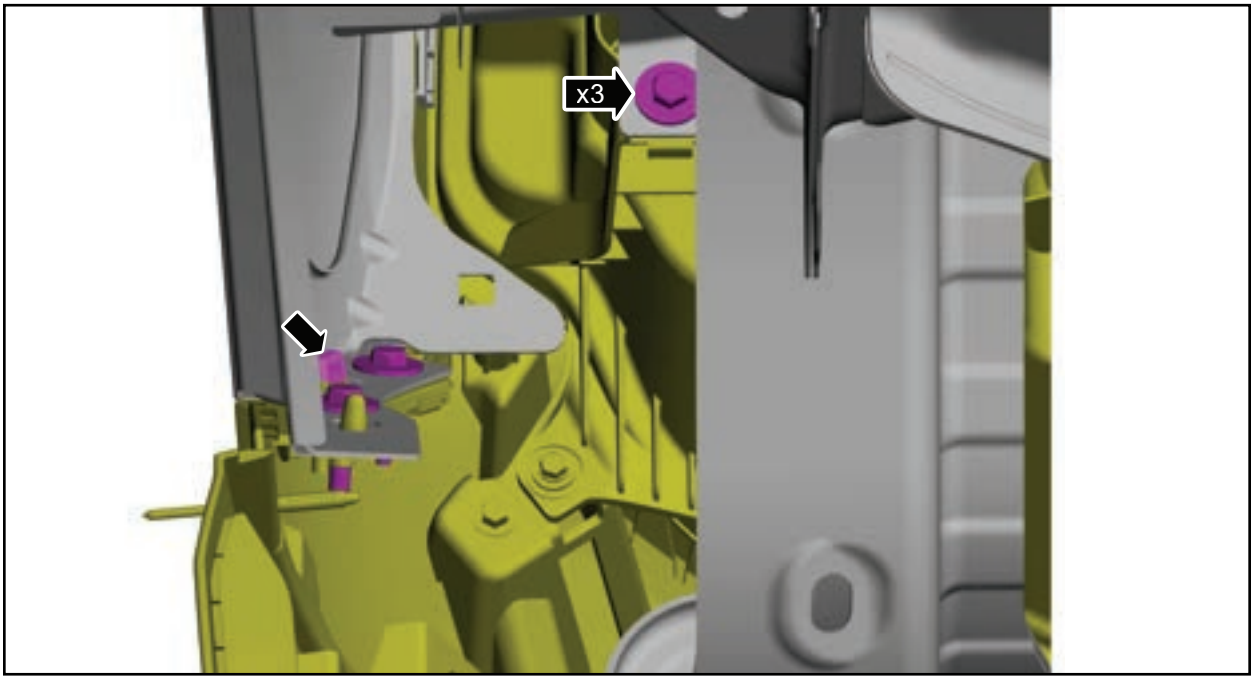
f. Disconnect the front bumper cover harness electrical connector, then if equipped, disconnect the camera washer hose and plug the washer hose end.



g. On both sides, disconnect the headlamp assembly electrical connector and position the wiring harness aside.

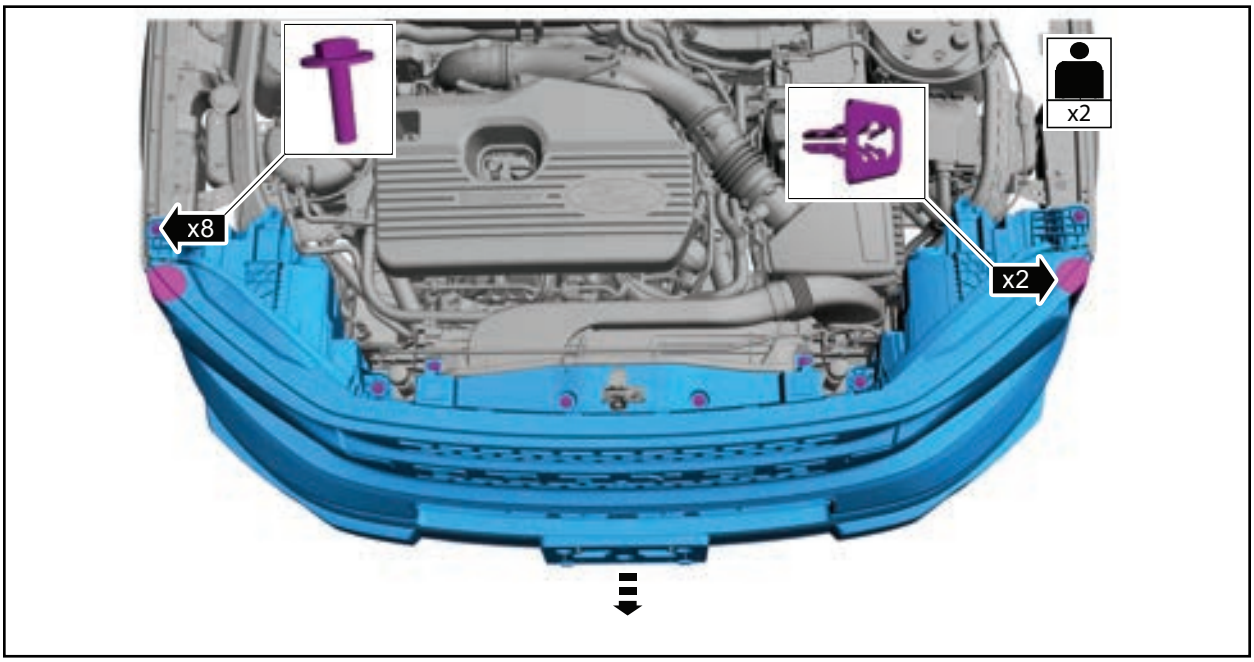


h. On both sides, remove the front bumper cover to fender bracket bolts and release the tab.



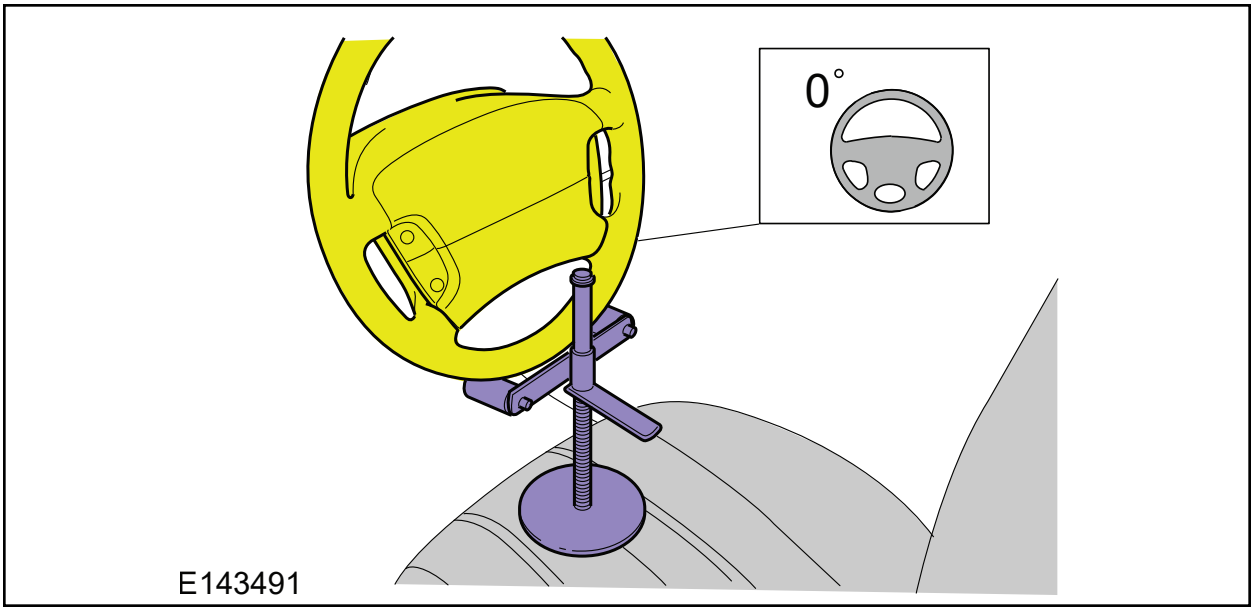
i. Remove the screws, release the clips and remove the front bumper cover.

NOTE: This step requires the aid of another technician.



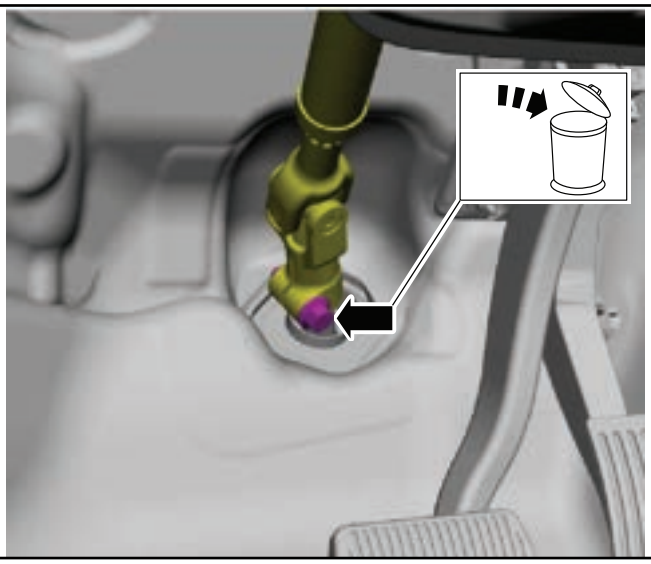
6. Remove the front subframe.

a. Steering wheel in straight ahead position.

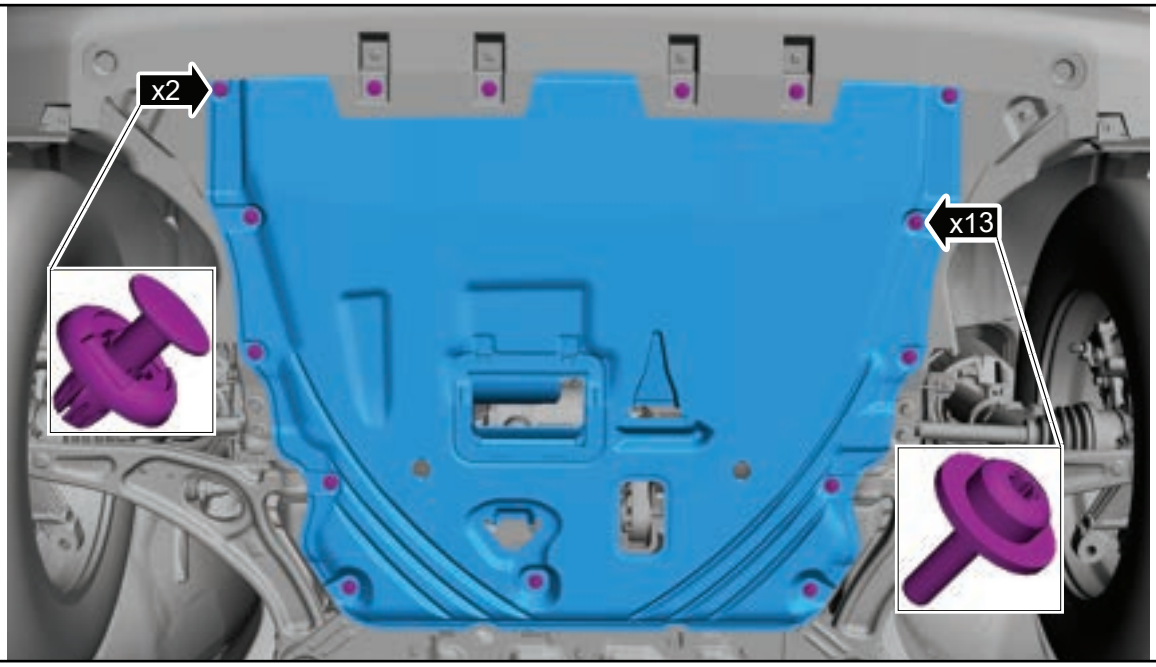


b. Remove and discard the steering column shaft coupler bolt and separate the coupler from the steering shaft.

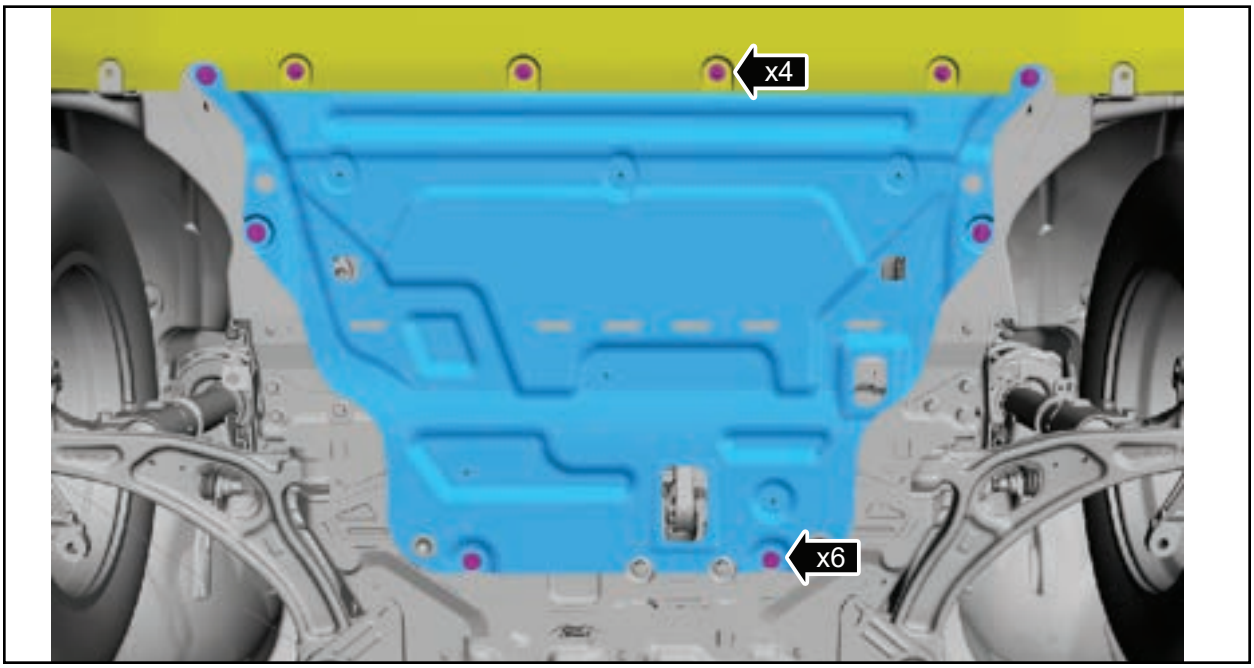
WARNING: Do not reuse steering column shaft bolts. This may result in fastener failure and steering column shaft detachment or loss of steering control. Failure to follow this instruction may result in serious injury to vehicle occupant(s).



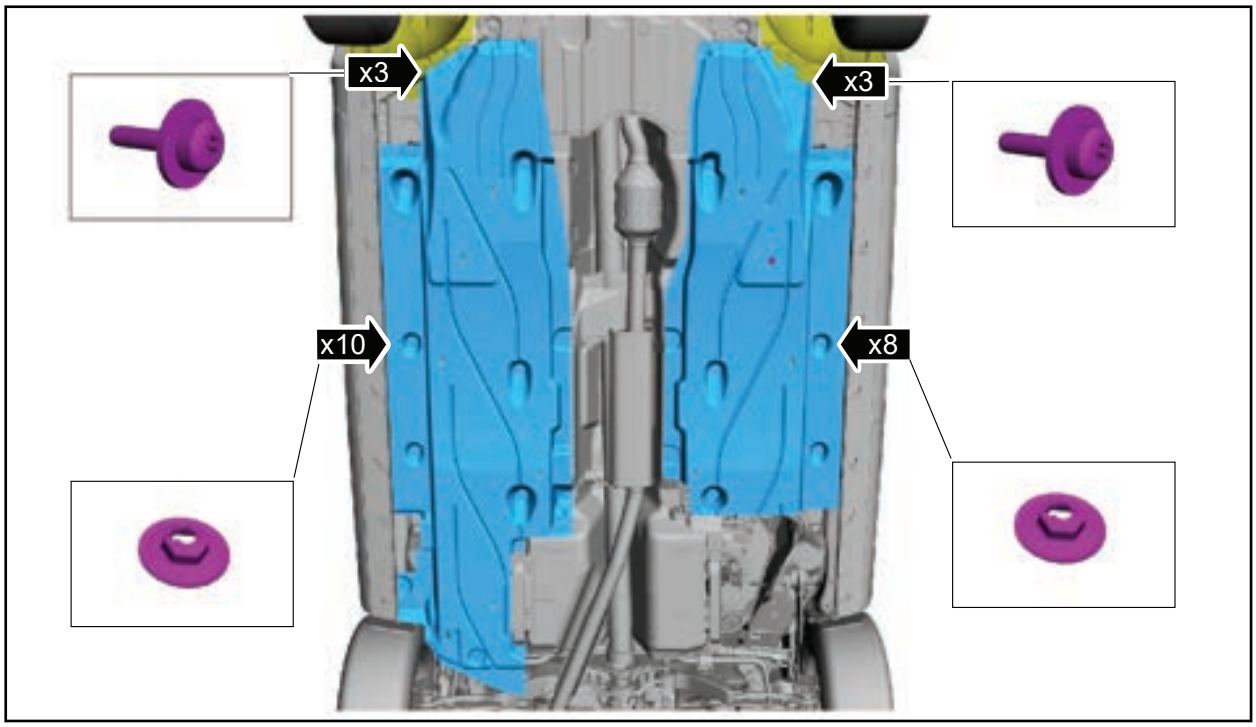
c. If equipped, remove the fasteners and the underbody shields.



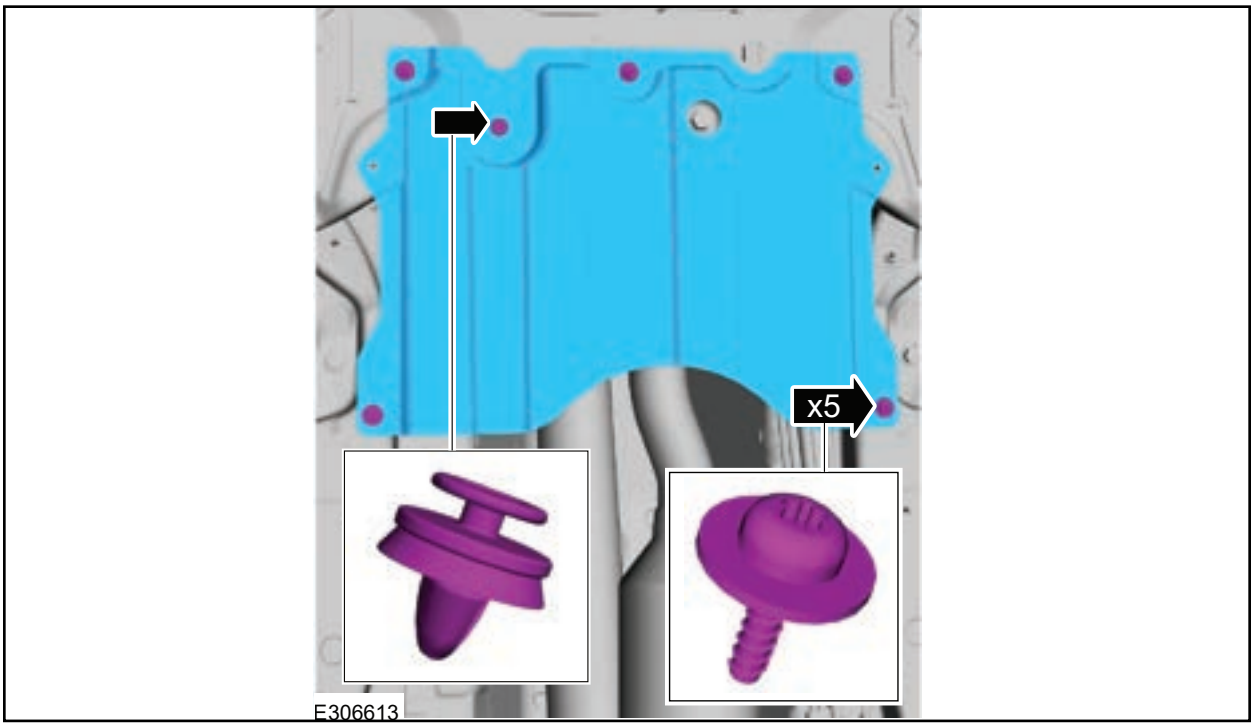
d. If equipped, remove the fasteners and the underbody shields.



e. Remove the retainers and the underbody shields.

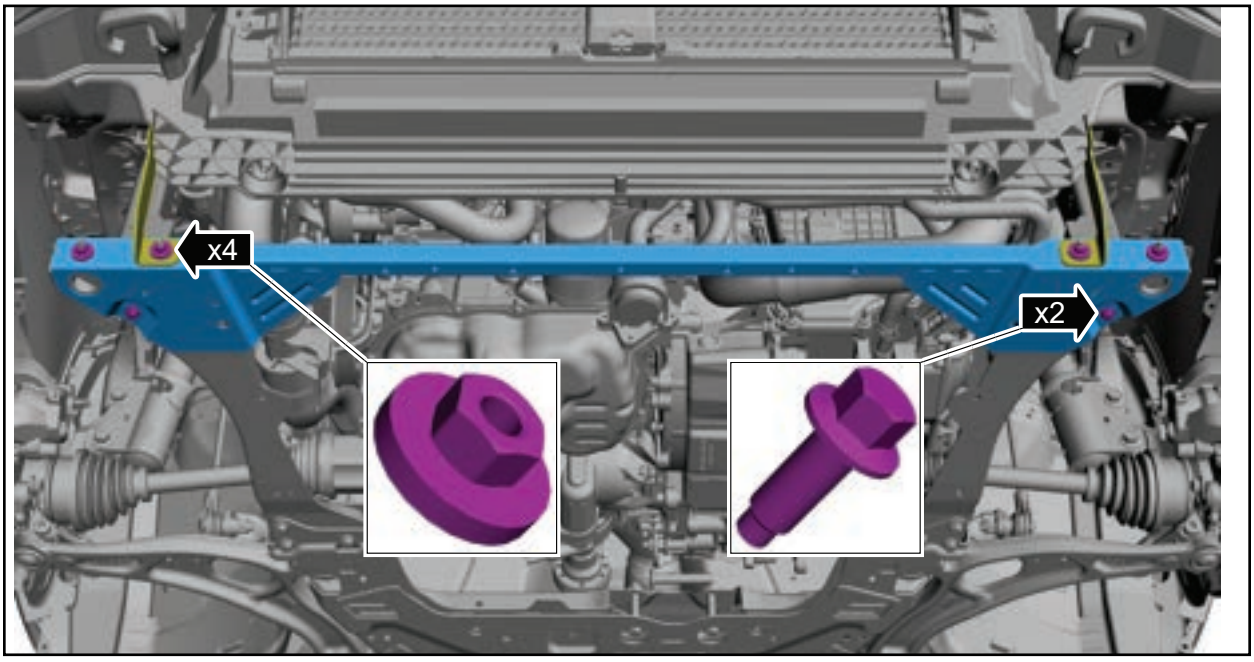


f. Remove the retainers and the underbody shields.

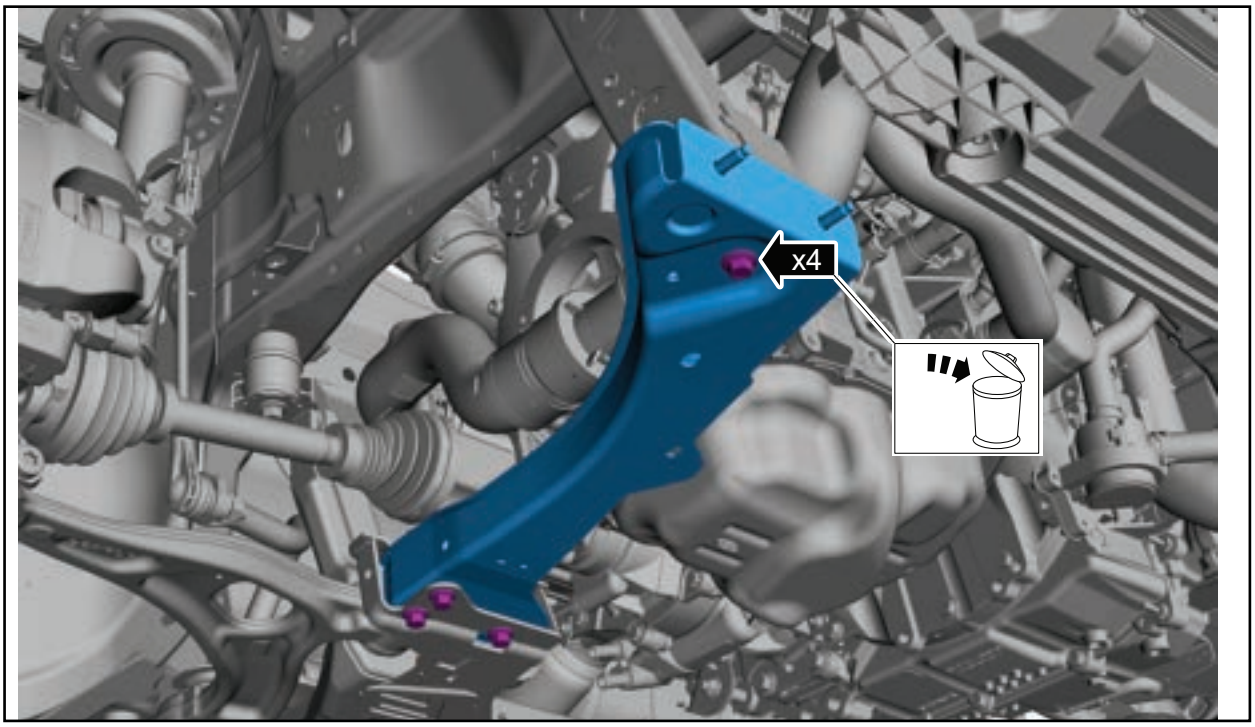


1.5L EcoBoost (132kW/180PS) - I3 (Y1)

g. Remove the fasteners and the front cross member.

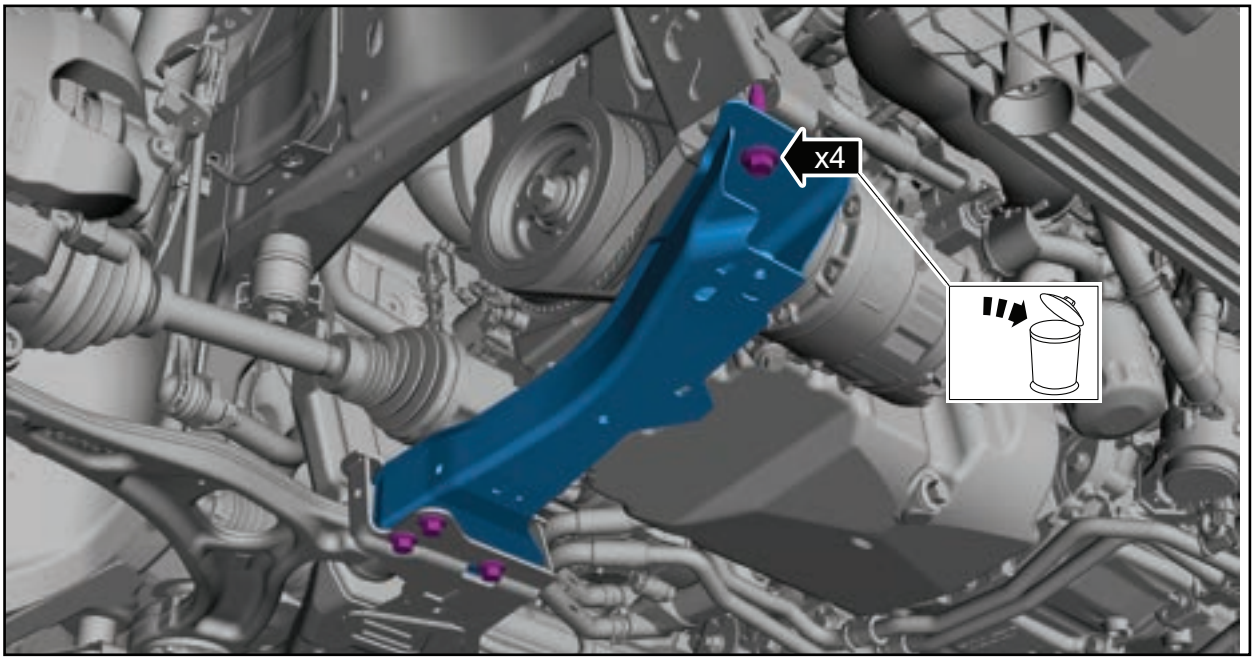


h. On both sides, remove and discard the bolts and remove the front outer side member.



2.0L EcoBoost (177kW/240PS) - MI4

i. On both sides, remove and discard the bolts and remove the front outer side member.

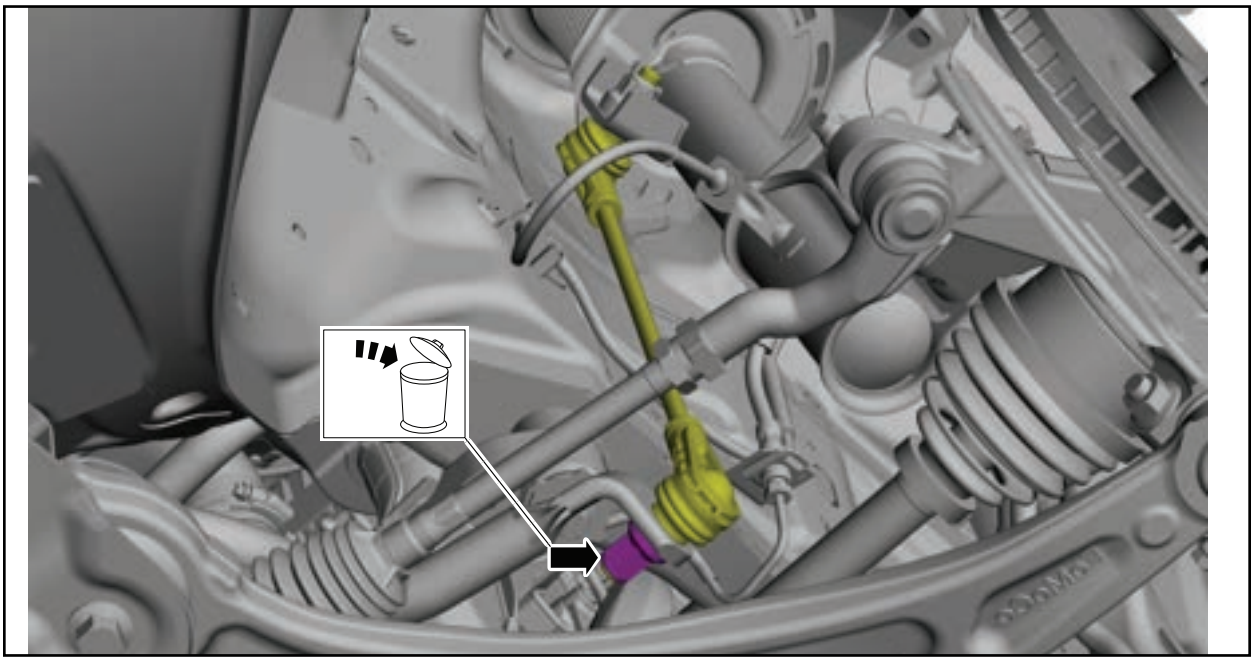


All Vehicles

j. On both sides, remove and discard the stabilizer bar link lower nut and position aside the stabilizer bar link.

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

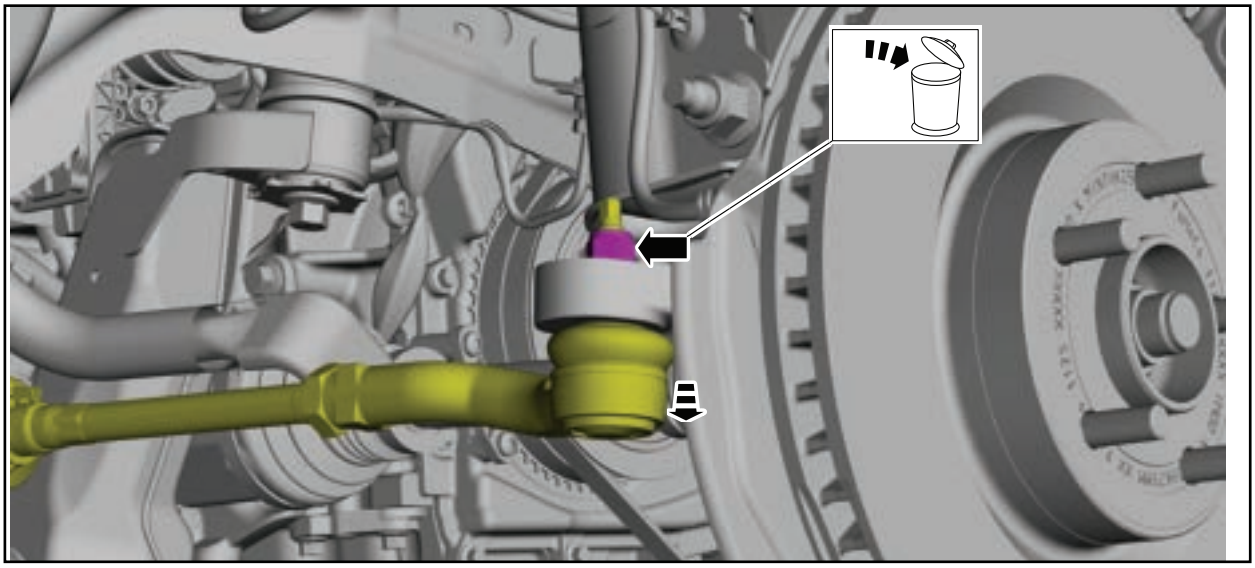
NOTE: Use the hex-holding feature to prevent the ball stud from turning while removing or installing the stabilizer bar link nut.



k. On both sides, remove and discard the tie rod end nut and separate the tie rod end from the wheel knuckle.
Use the General Equipment: Tie Rod End Remover

NOTICE: Do not use a hammer to separate the outer tie-rod end from the wheel knuckle or damage to the wheel knuckle may result.

NOTICE: Use care when installing the tie rod separator or damage to the outer tie-rod end boot may occur.

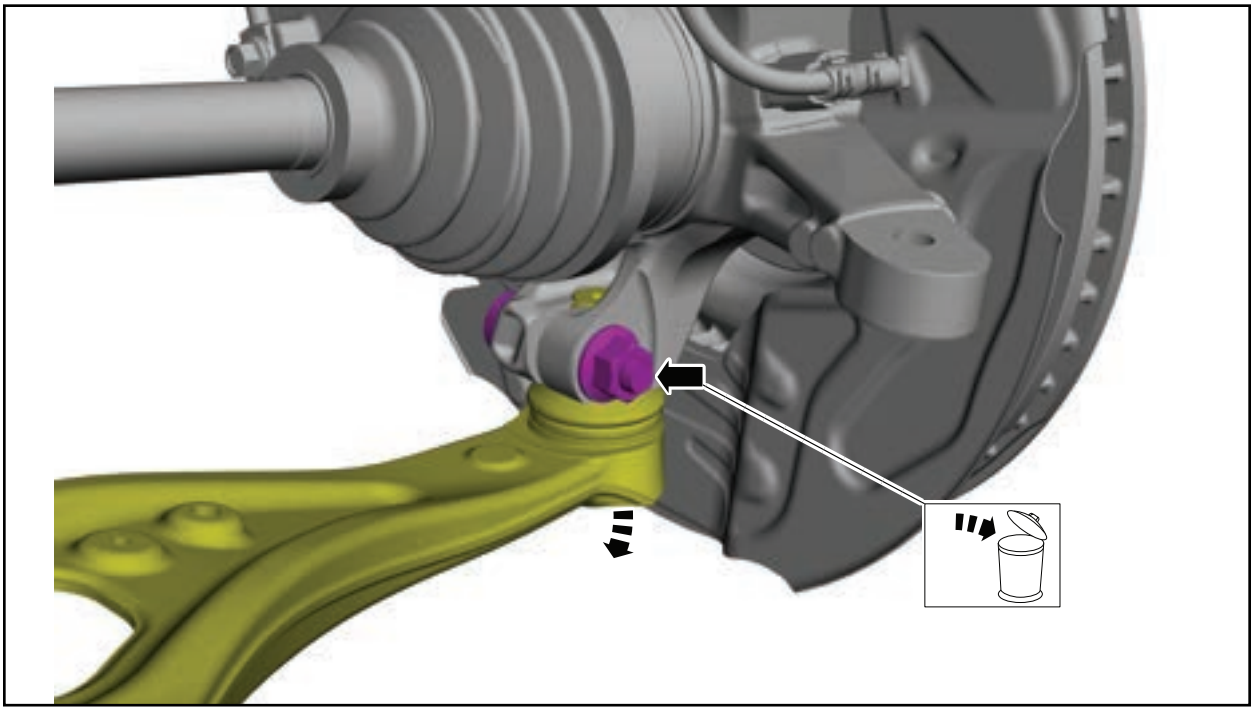


l. On both sides, remove and discard the ball joint pinch bolt and nut and separate the ball joint from the wheel knuckle.

NOTICE: Do not use a prying device to open the slot in the knuckle to separate the lower ball joint from the knuckle assembly. Damage to the knuckle assembly may occur.

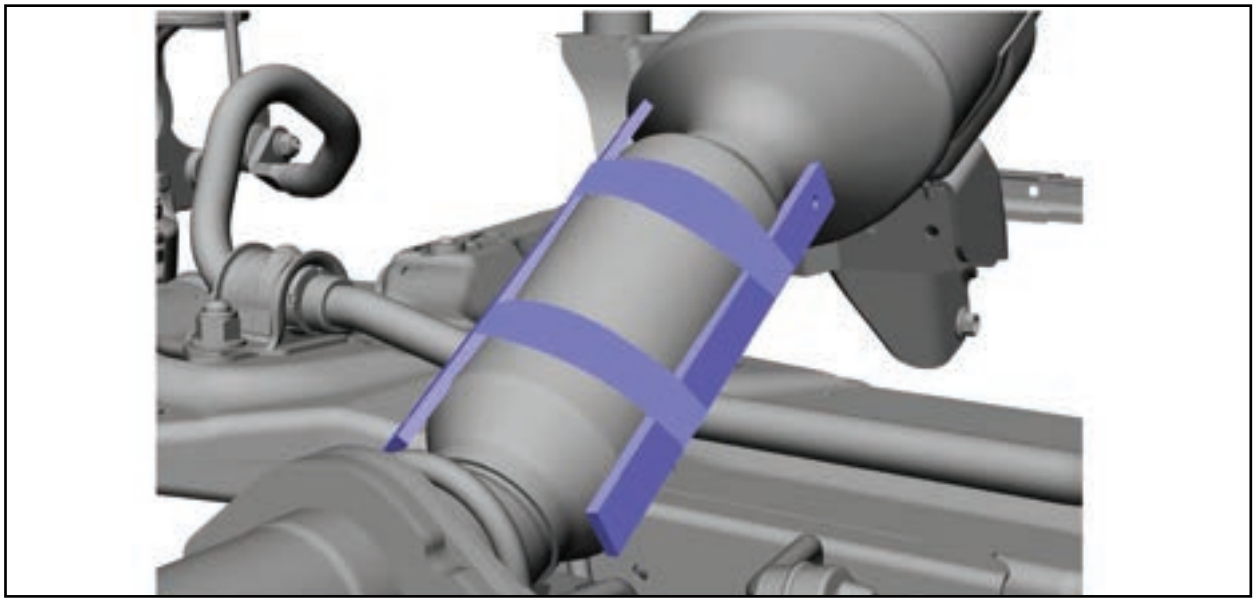
NOTICE: Do not use a prying device or separator fork between the ball joint and the wheel knuckle. Damage to the ball joint or ball joint seal may result. Only use the pry bar by inserting it into the lower arm body opening.

NOTICE: Use care when releasing the lower arm and wheel knuckle into the resting position or damage to the ball joint seal may occur.

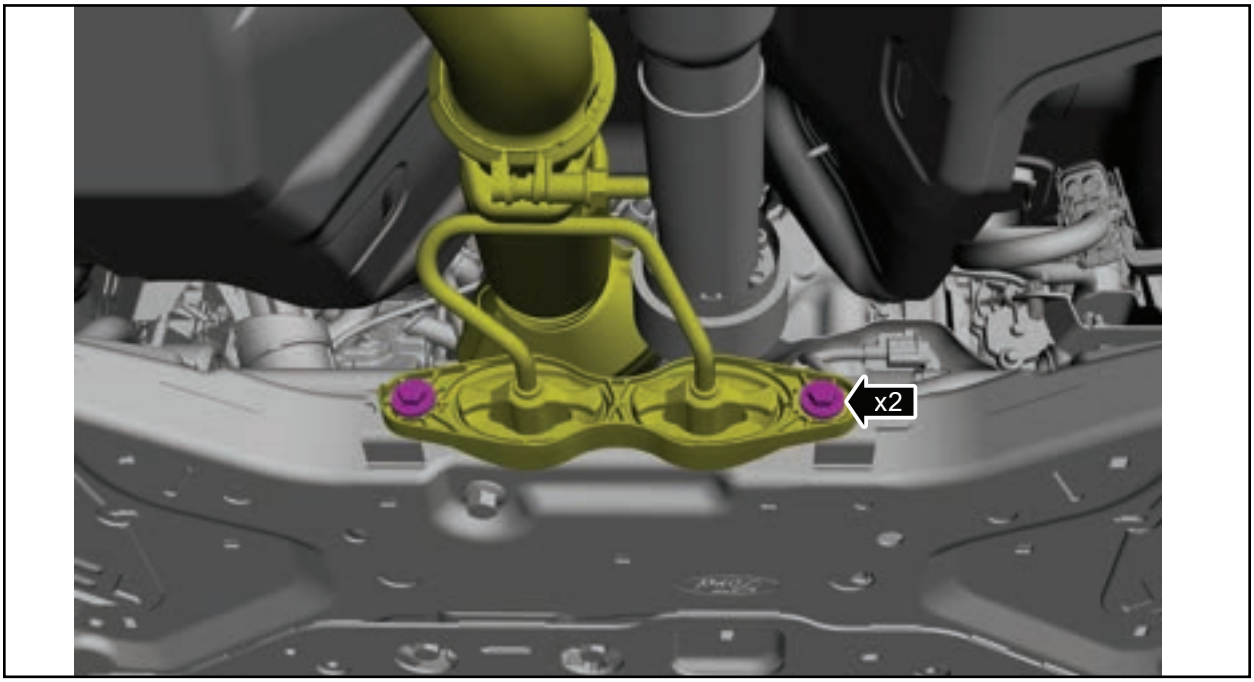


m. Secure the exhaust flexible pipe.

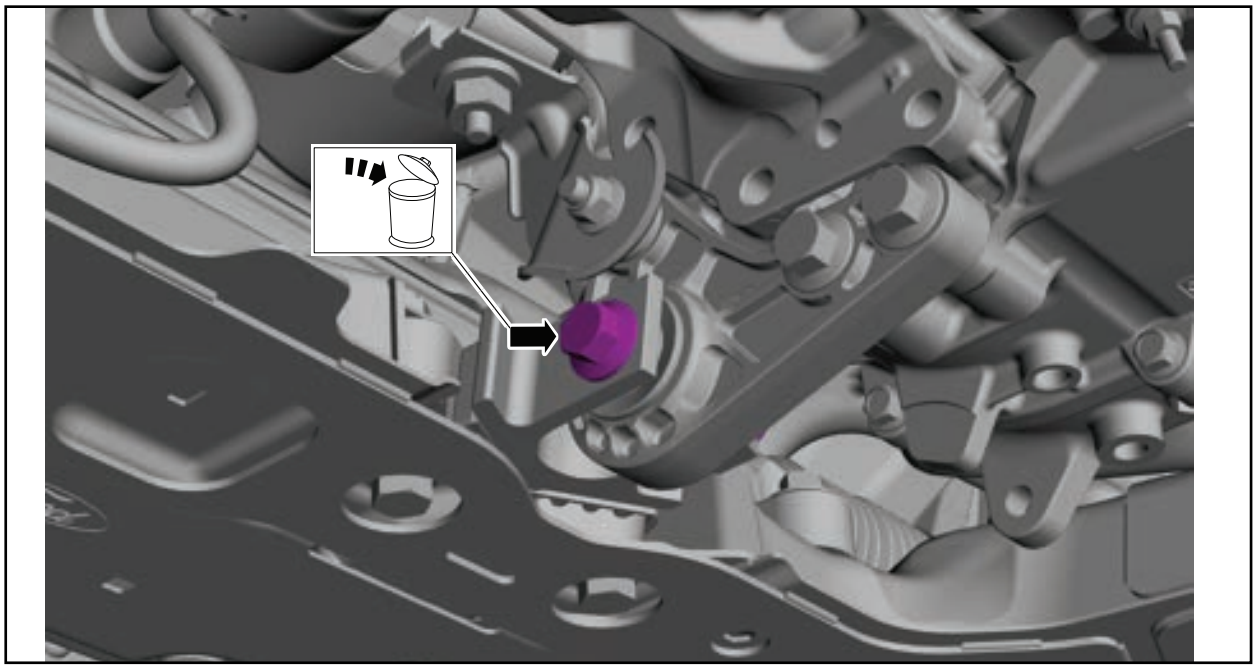
NOTICE: Do not excessively bend or twist the exhaust flexible pipe. Failure to follow these instructions may cause damage to the exhaust flexible pipe.



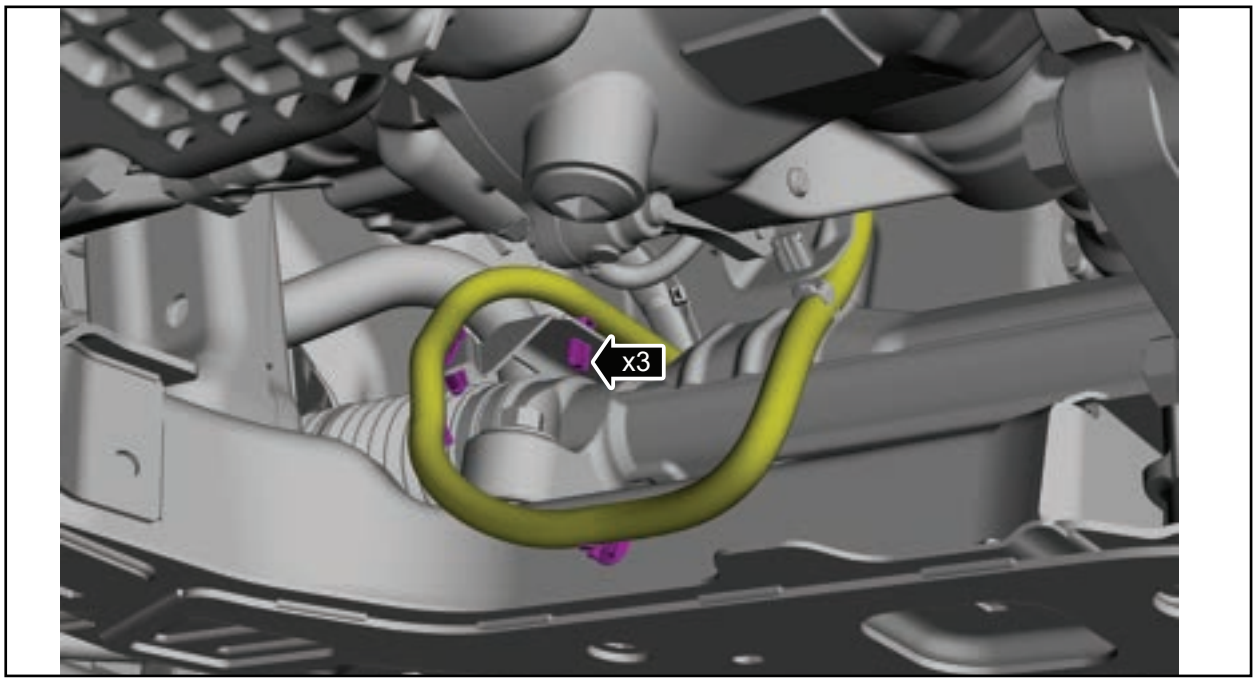
n. Remove the exhaust support bracket bolts.



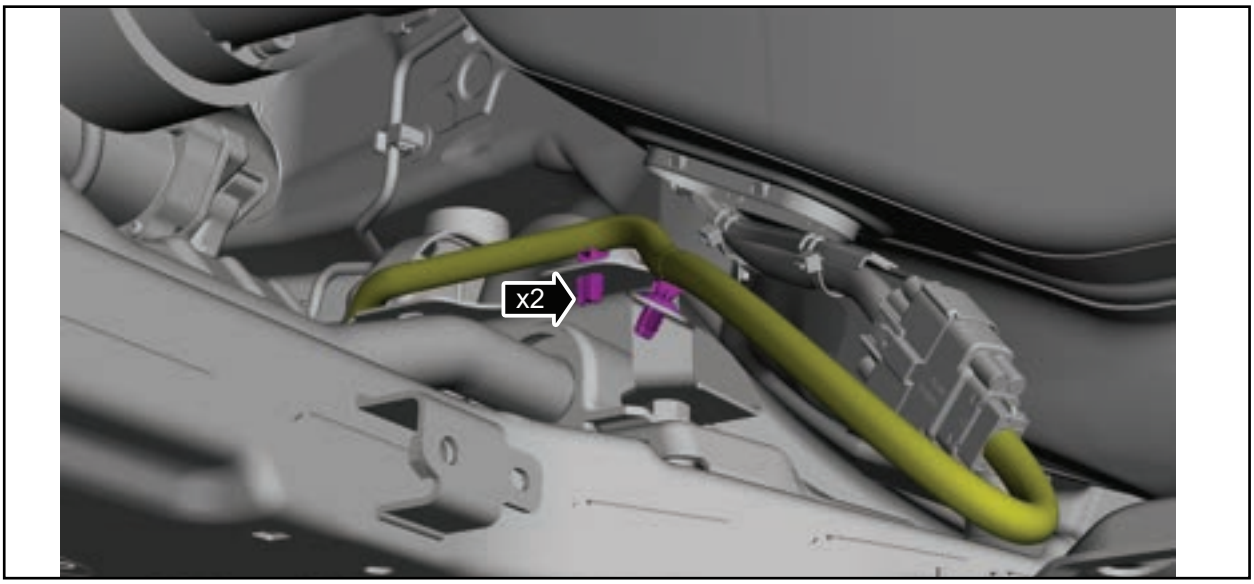
o. Remove and discard the roll restrictor bolt.



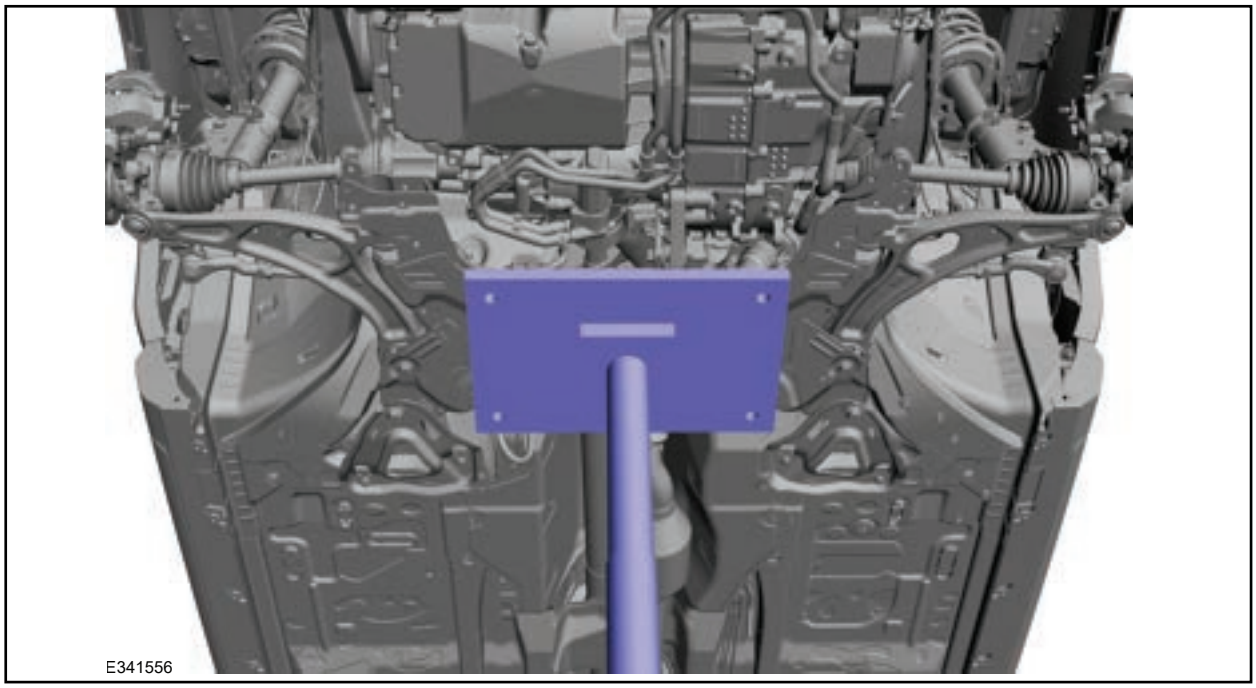
p. Unclip the wire harness retainers.



q. Unclip the wire harness retainers.

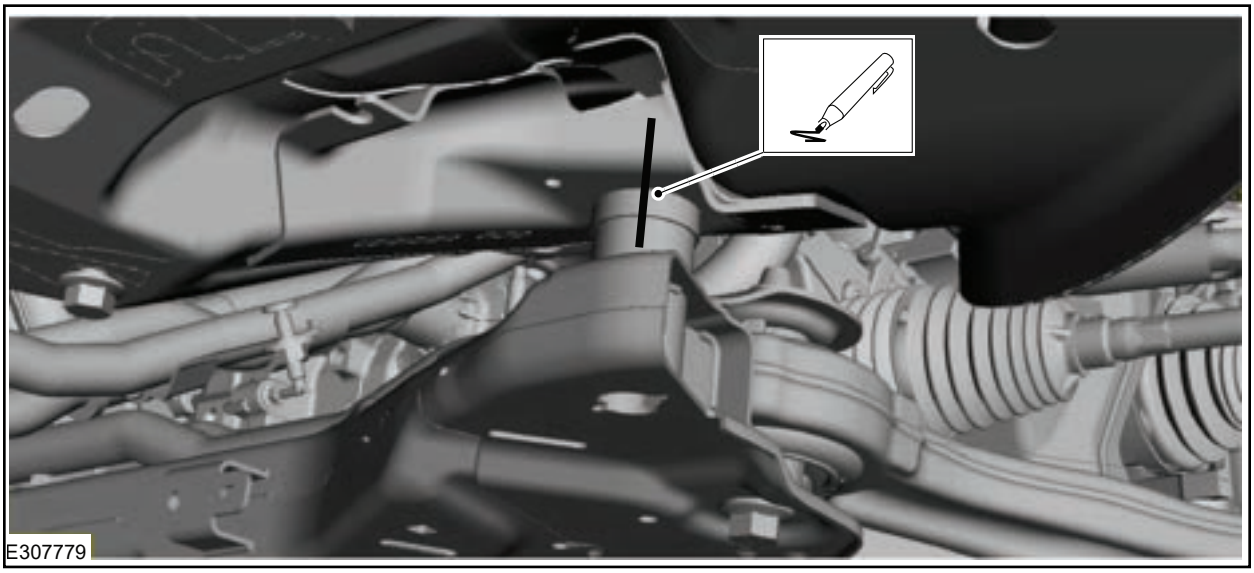


r. Position a transmission jack under the front subframe.
Use the General Equipment: Transmission Jack



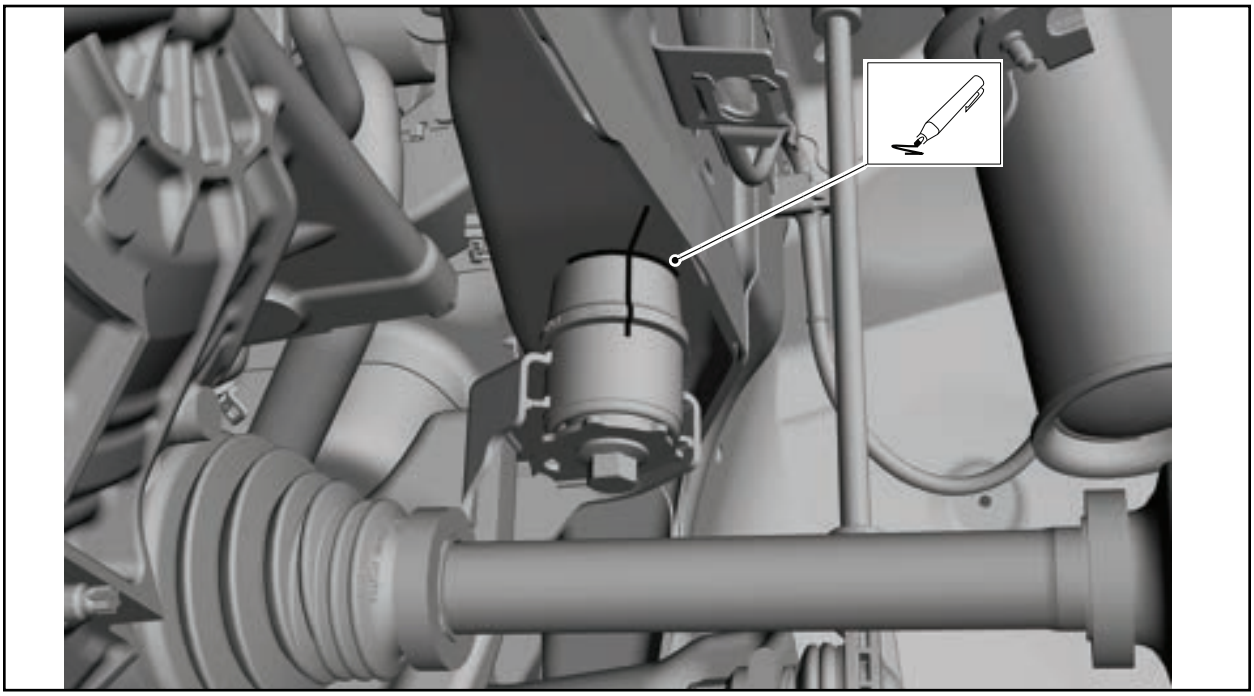
s. On both sides, index-mark the subframe to the body.

NOTE: Rear mounting location shown.

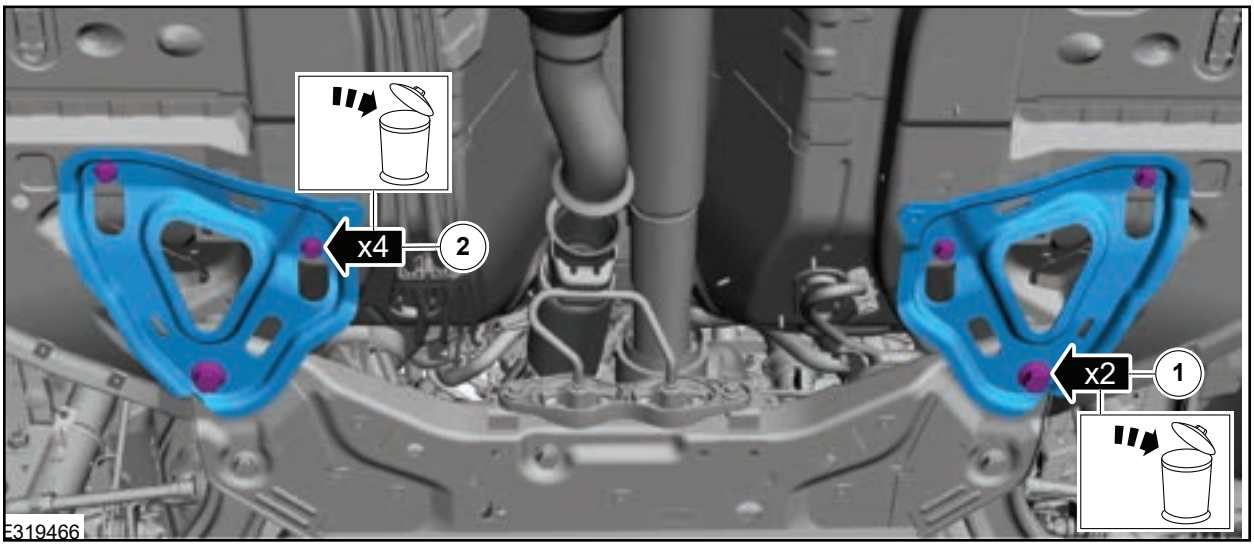


t. On both sides, index-mark the subframe to the body.

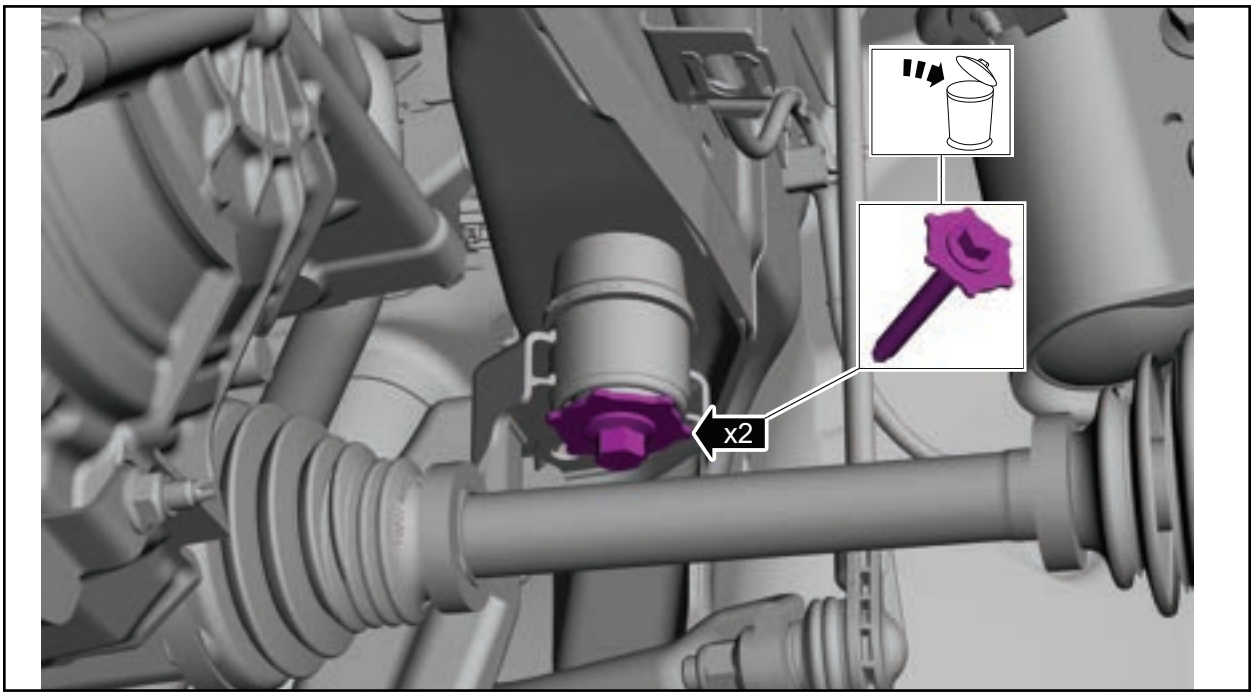
NOTE: Front mounting location shown.



u. Remove and discard the rearward subframe bolts, then remove and discard the bolts and remove the subframe brackets.

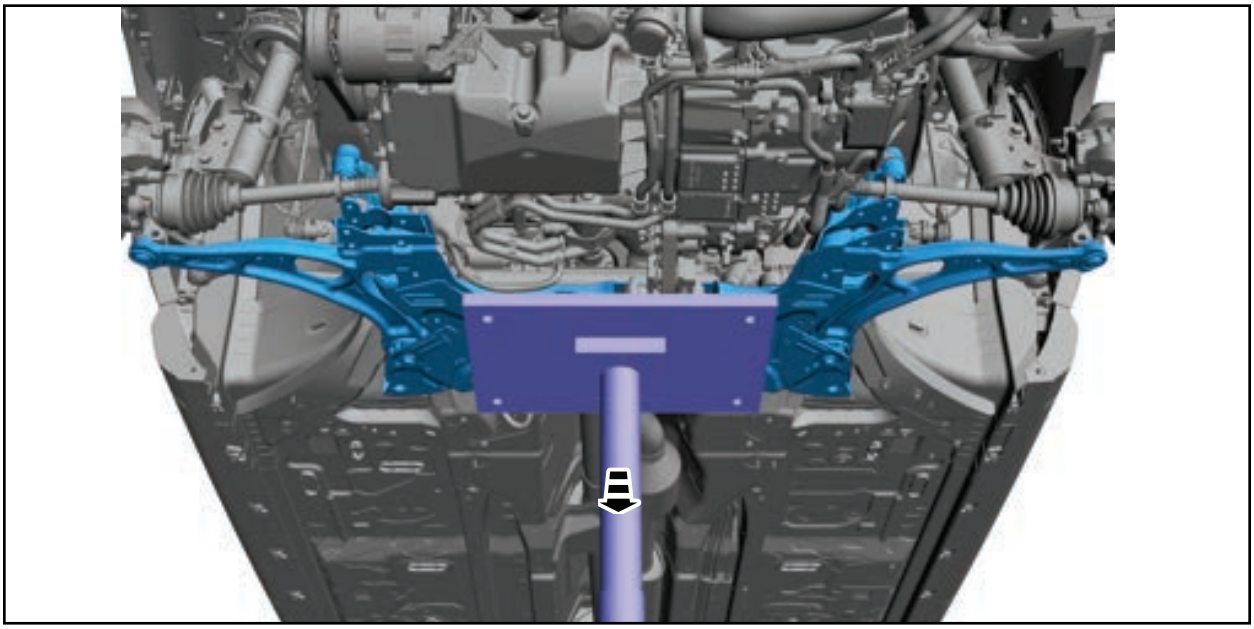


v. On both sides, remove and discard the forward subframe bolts.



w. Lower the subframe.
Use the General Equipment: Transmission Jack

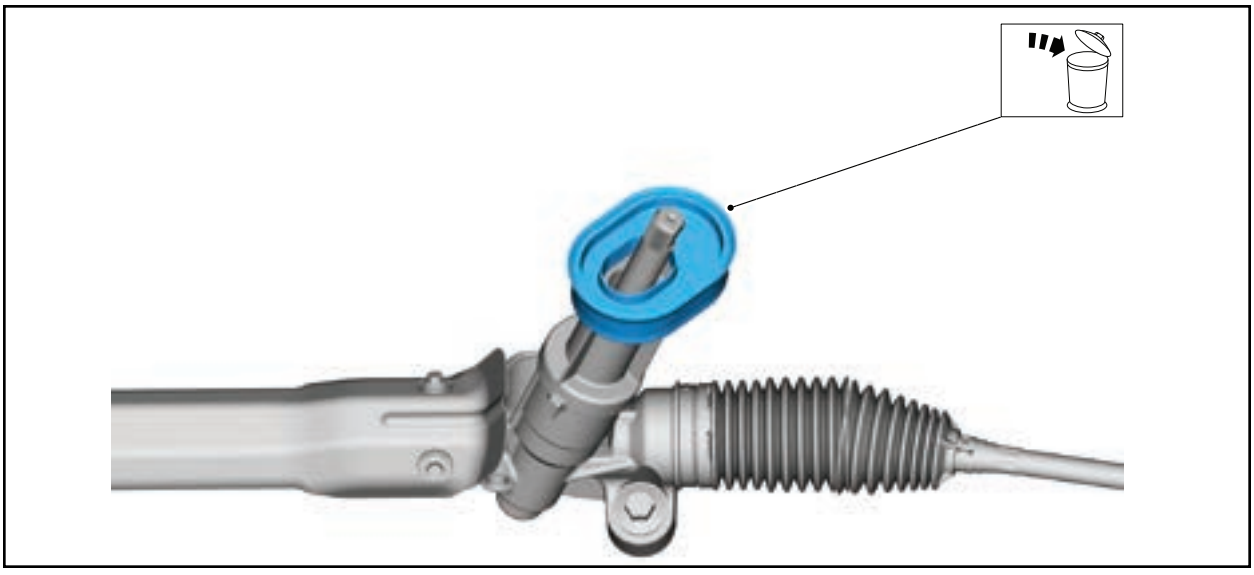
NOTE: Make sure that no components catch.



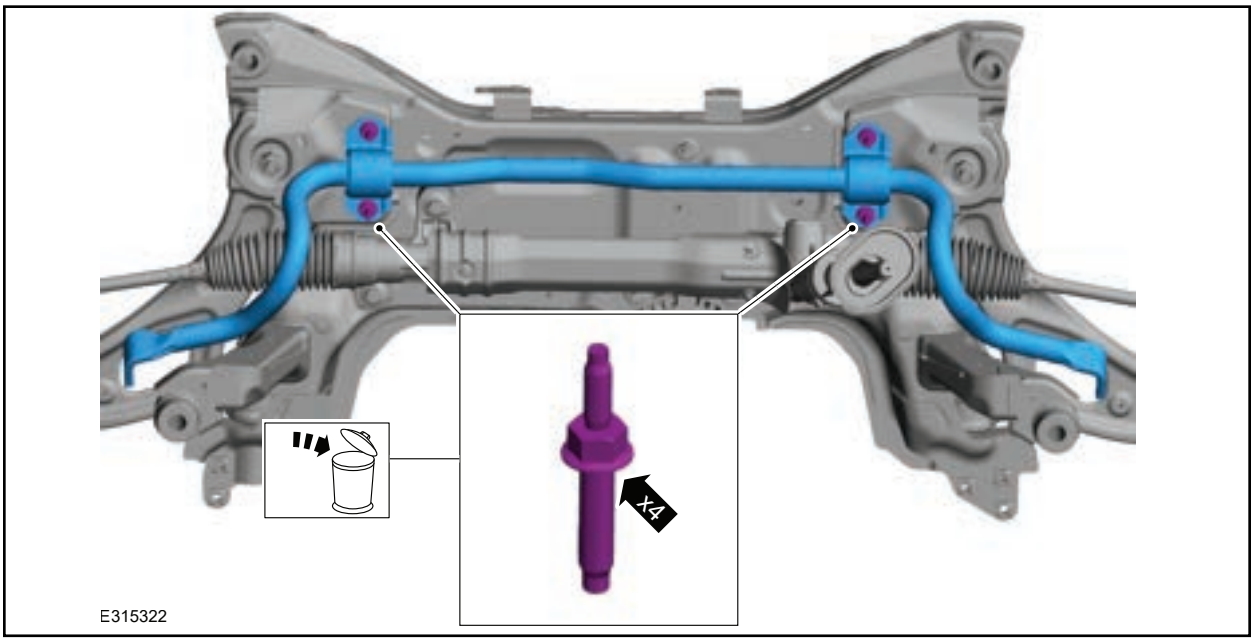
x. Remove and discard the steering column floor seal.

NOTICE: The steering column floor seal is a one time use seal and must be replaced anytime that the front subframe is lowered or separated from the vehicle.

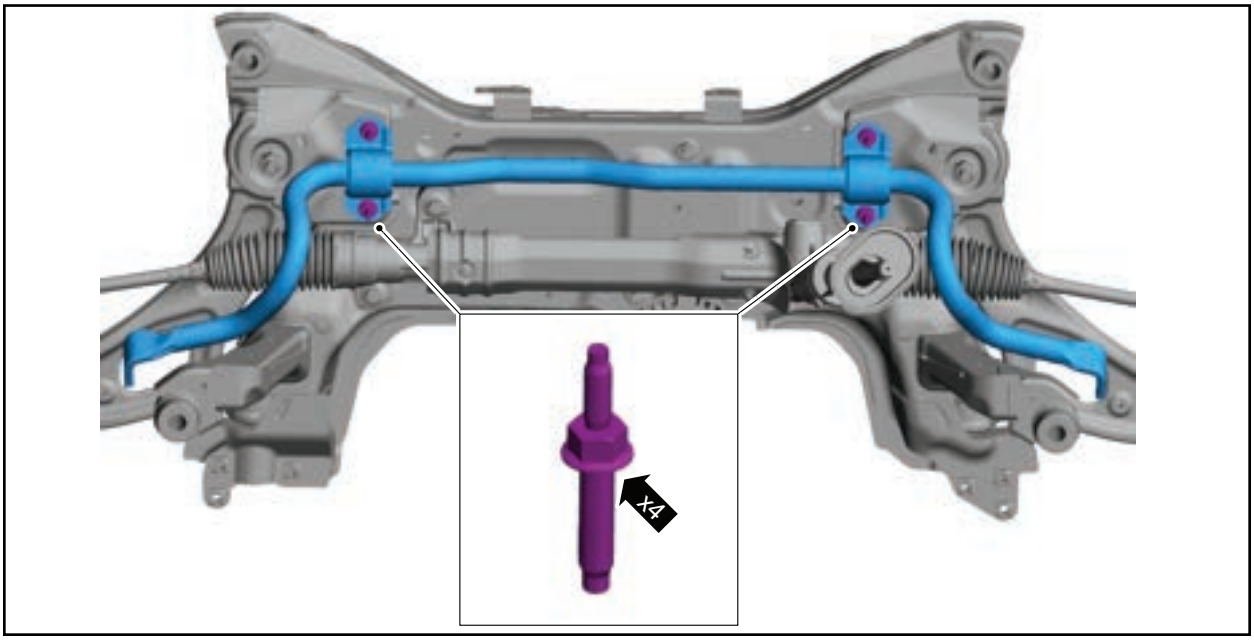
NOTE: Note the position of the component before removal.



7. Remove and discard the stabilizer bar bracket-to-front subframe retainers and remove the front stabilizer bar.



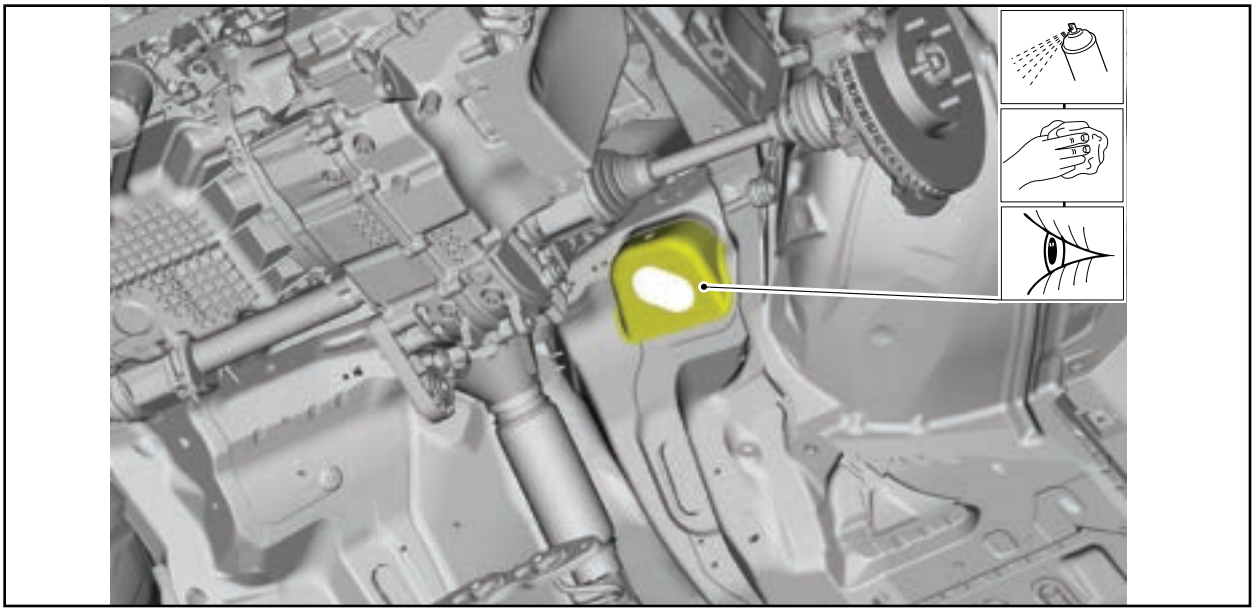
8. Install the new front stabilizer bar, then install the new stabilizer bar bracket-to-front subframe retainers.
   - Torque: 46 lb.ft (63 Nm)



9. Install the front subframe.

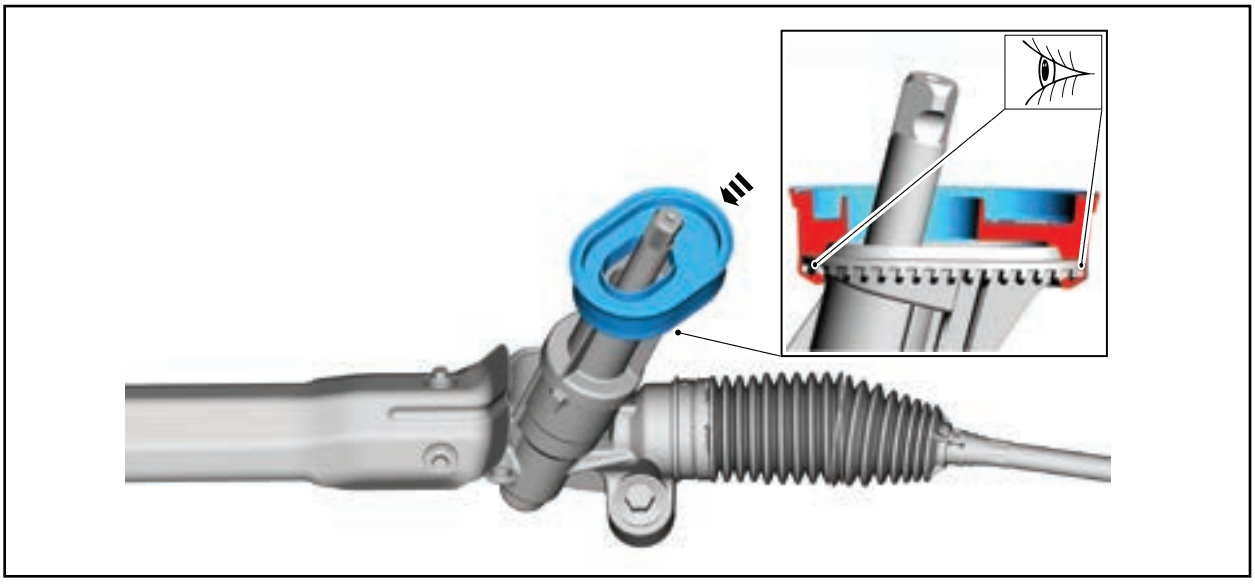
a. Clean and inspect the steering column floor seal mounting surface before reinstallation.
Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B

NOTE: The steering column floor seal mounting surface must be cleaned using solvent before reinstallation.

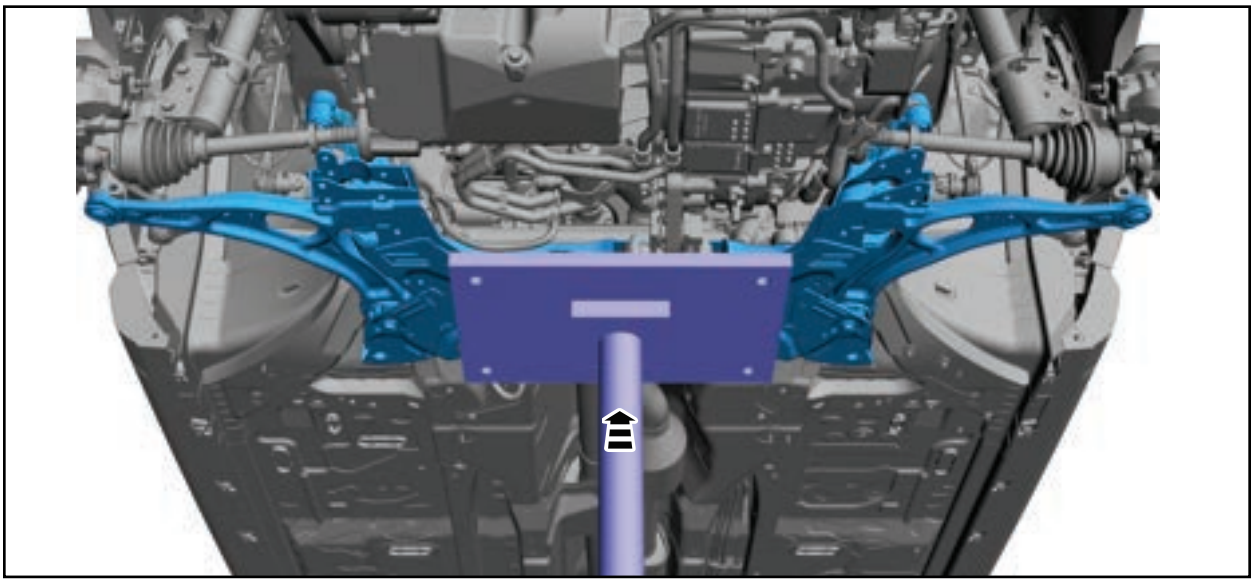


b. Install the new steering column floor seal.

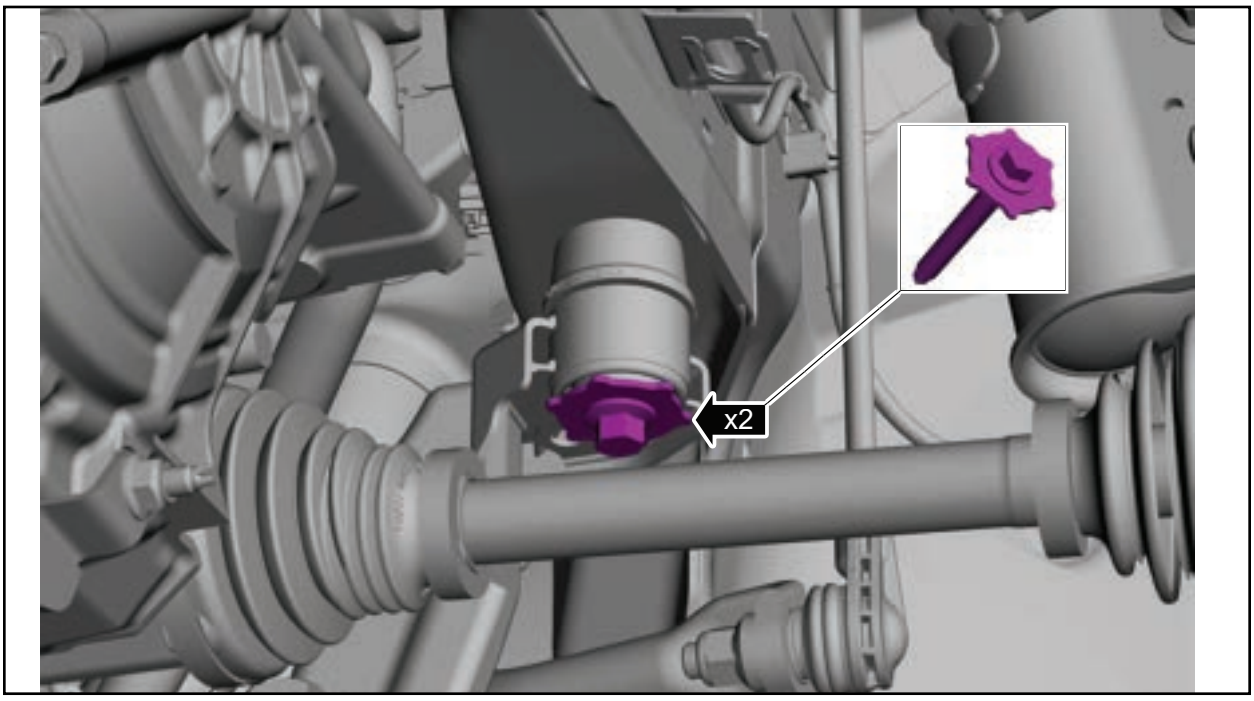
NOTE: Make sure that the floor seal lip is fully wrapped around the carrier on the steering gear.



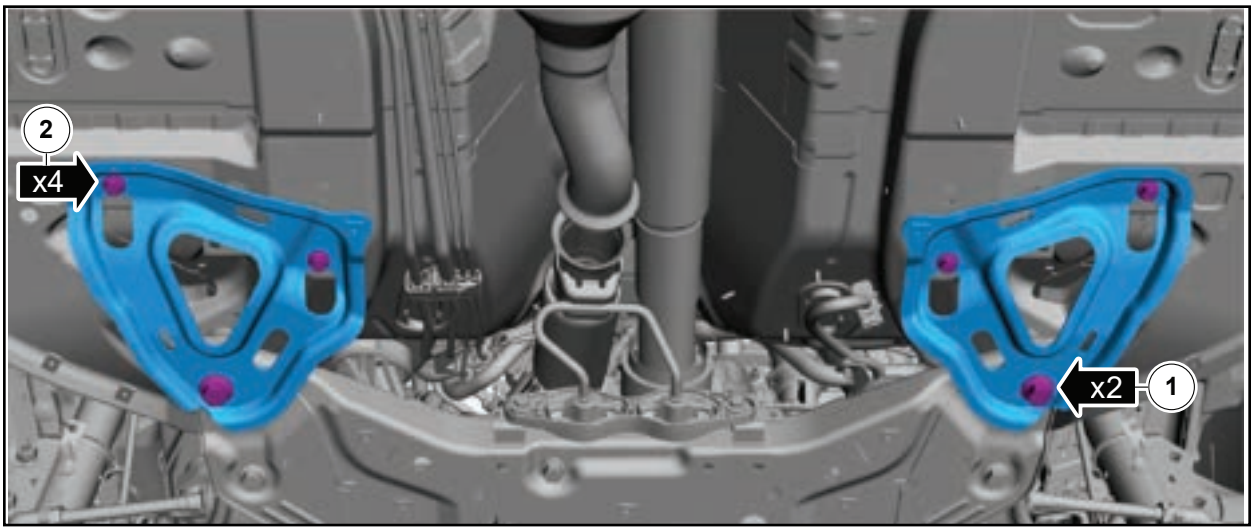
c. Partially raise the subframe and position it to the vehicle.
Use the General Equipment: Transmission Jack



d. On both sides, install the new forward subframe bolts finger tight.

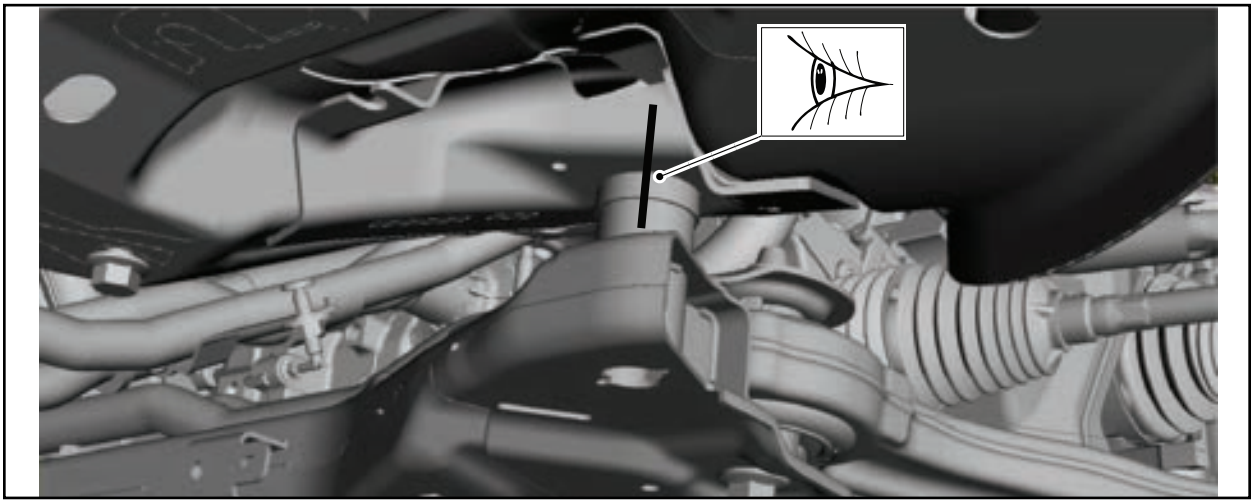


e. Install the subframe brackets and the new rearward subframe bolts finger tight, then install the new subframe bracket bolts finger tight.



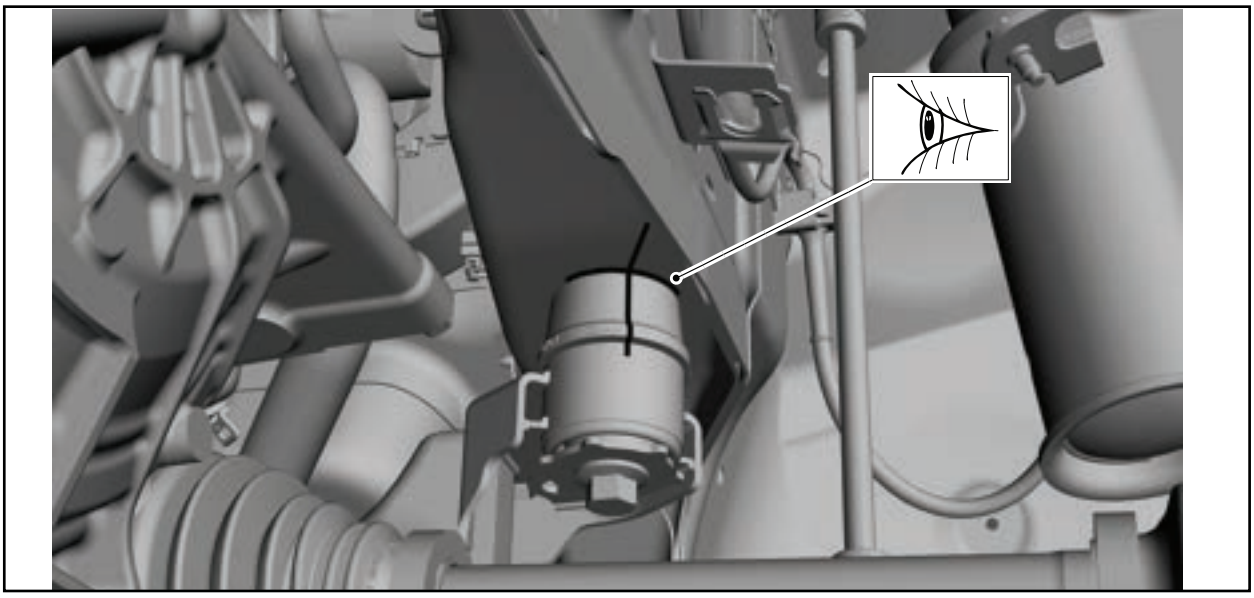
f. On both sides, align the index-mark made during removal.

NOTE: Rear mounting location shown.

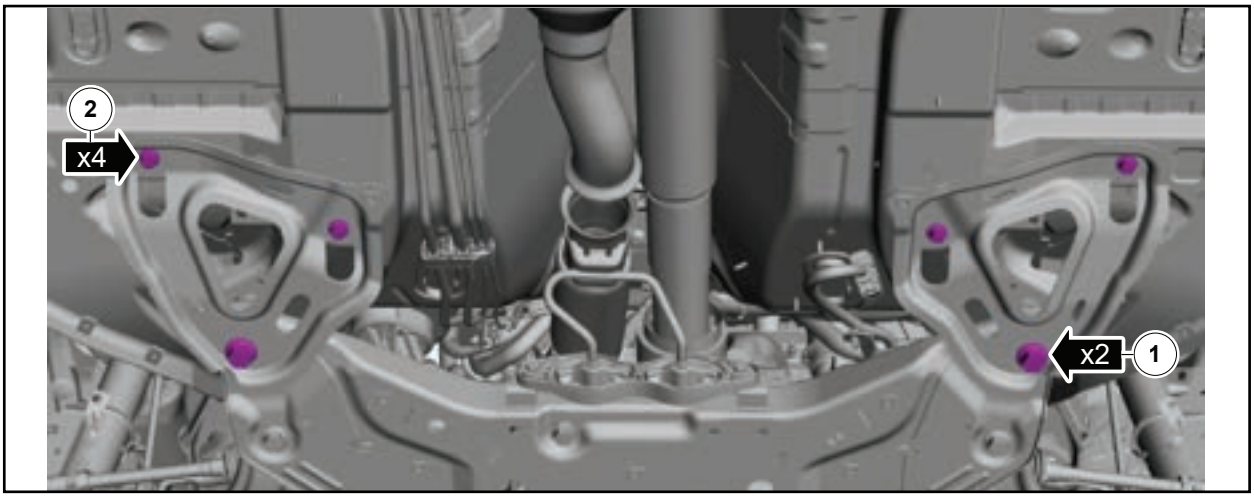


g. On both sides, align the index-mark made during removal.

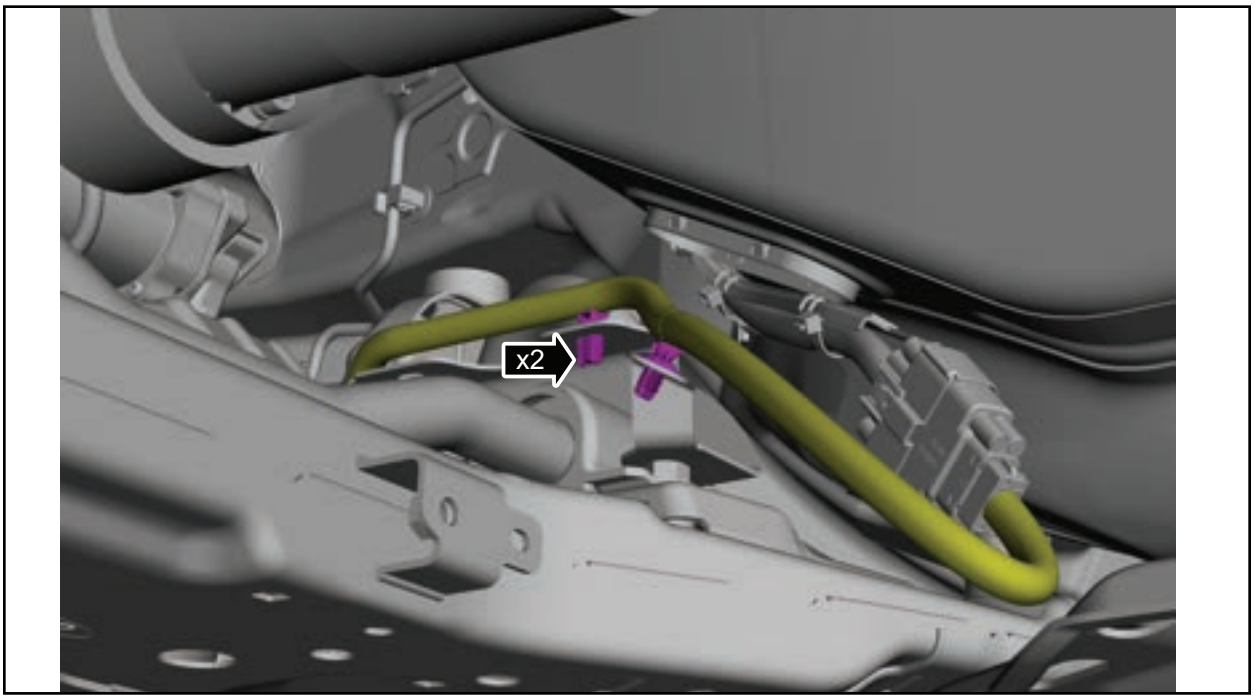
NOTE: Front mounting location shown.



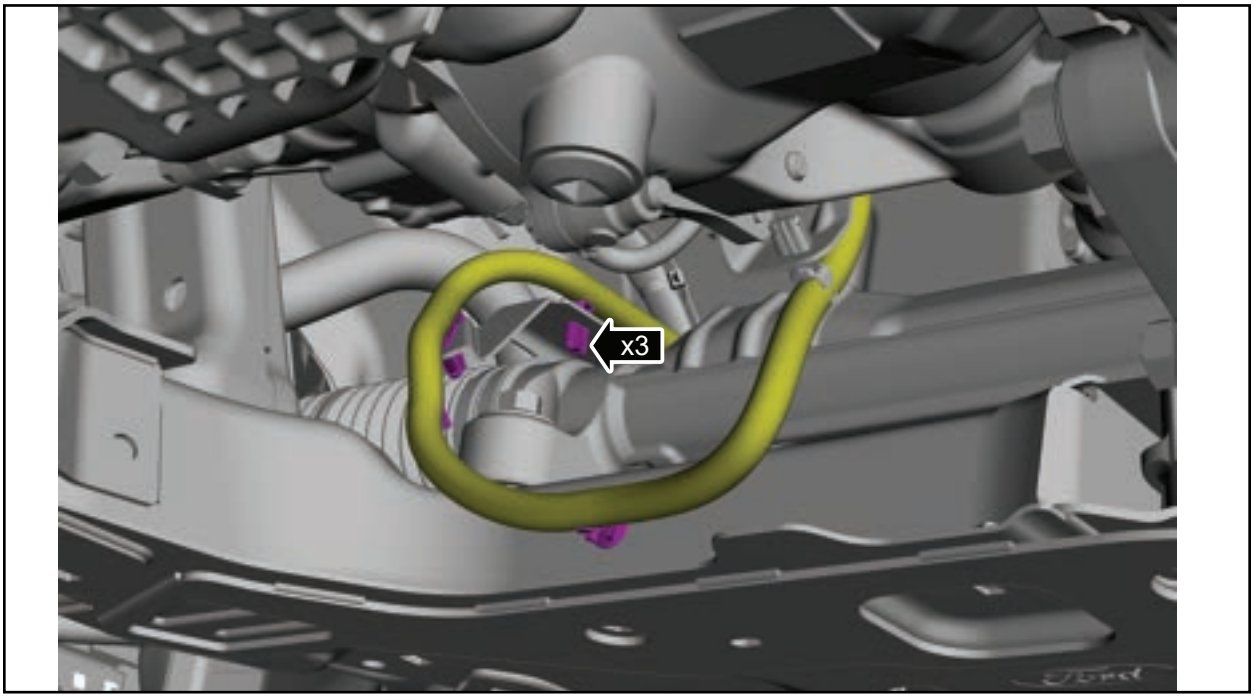
h. Tighten the bolts.
1. Torque:
   Stage 1: 159 lb.ft (215 Nm)
   Stage 2: 120°
2. Torque: 46 lb.ft (63 Nm)



i. Clip the wire harness retainers.

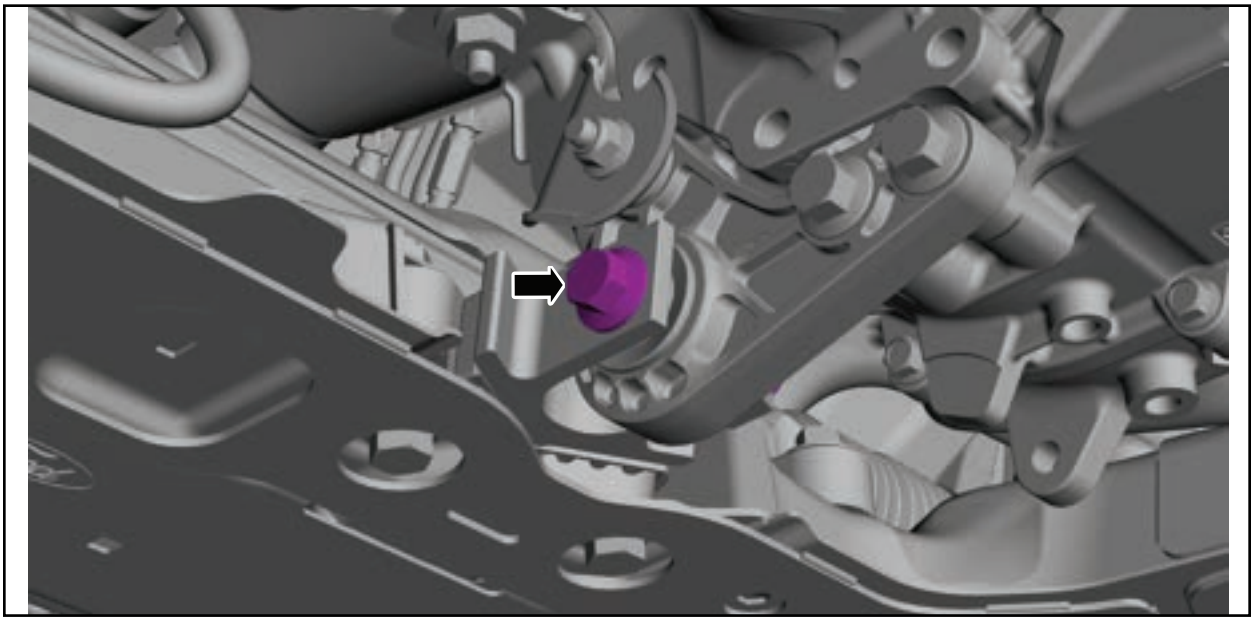


j. Clip the wire harness retainers.

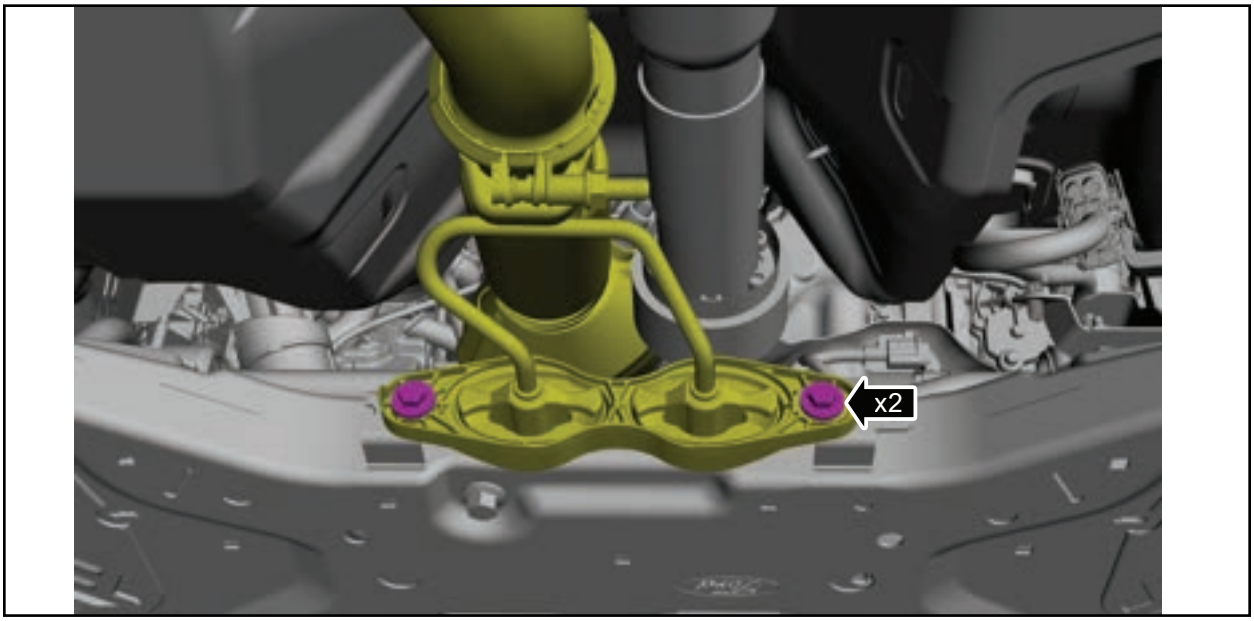


k. Install the new roll restrictor bolt.
- Torque: 129 lb.ft (175 Nm)

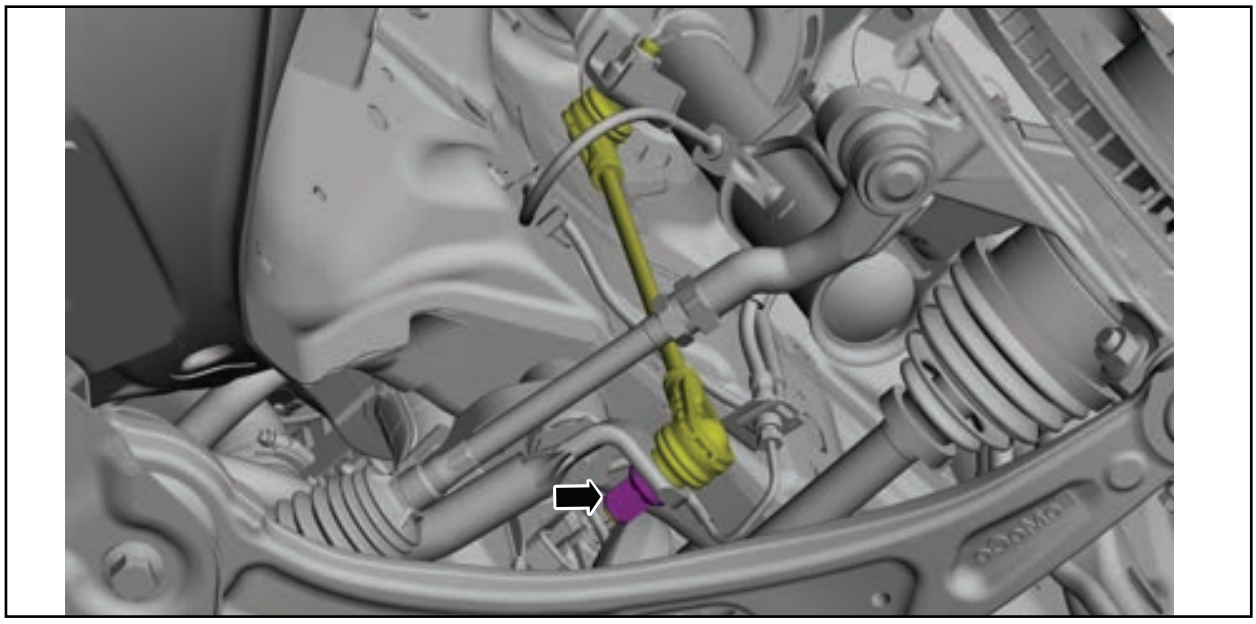
NOTE: 2.0L GTDI shown, others similar.



l. Install the exhaust support bracket bolts.
- Torque: 18 lb.ft (25 Nm)

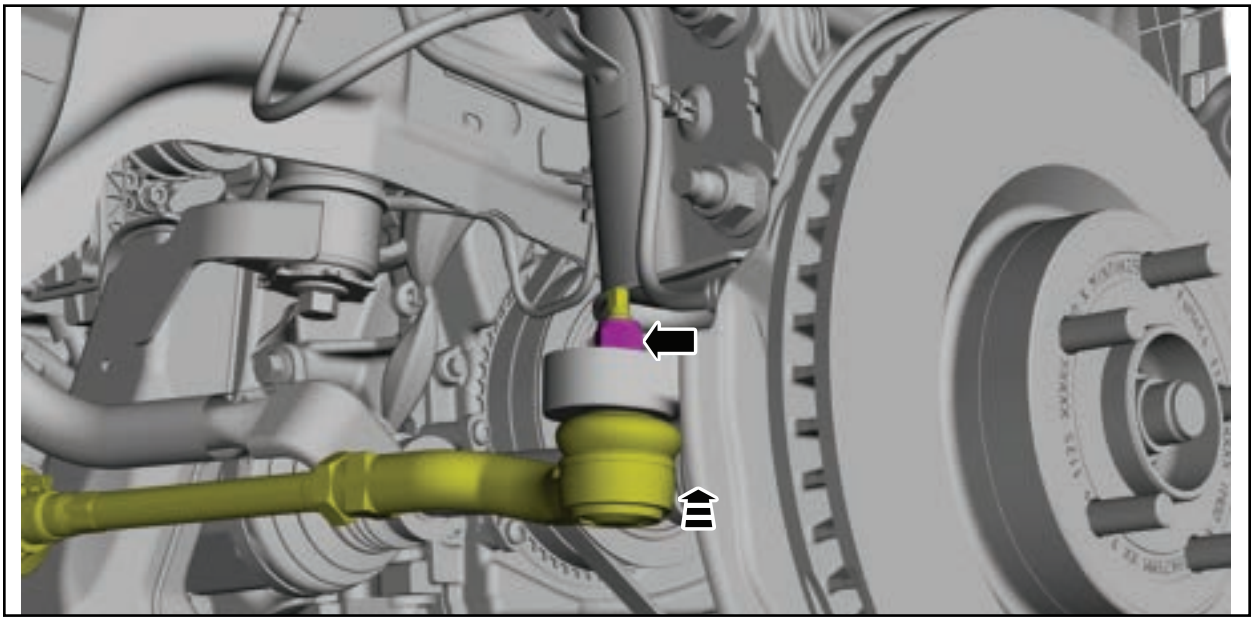


m. On both sides, connect the lower ball joint to the wheel knuckle and install the new ball joint pinch bolt and nut.
- Torque: 81 lb.ft (110 Nm)



n. On both sides, connect the tie rod end to the wheel knuckle and install the new tie rod end nut.
- Torque: 35 lb.ft (48 Nm)

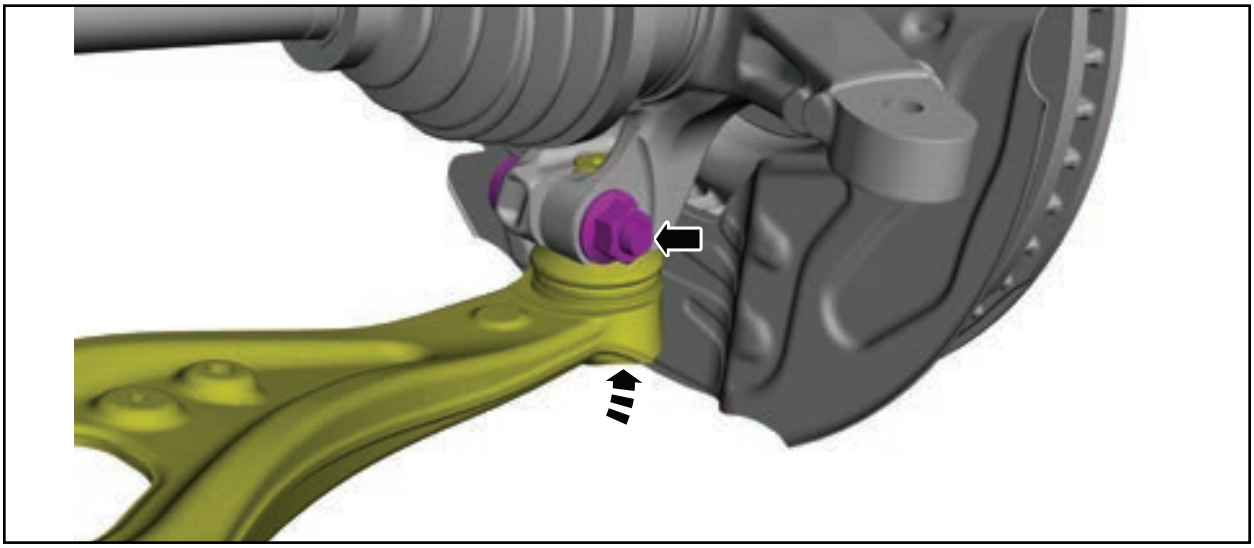
NOTE: Make sure that the ball joint ball does not rotate.



o. On both sides, position the stabilizer bar links and install the new stabilizer bar link lower nut.
- Torque: 85 lb.ft (115 Nm)

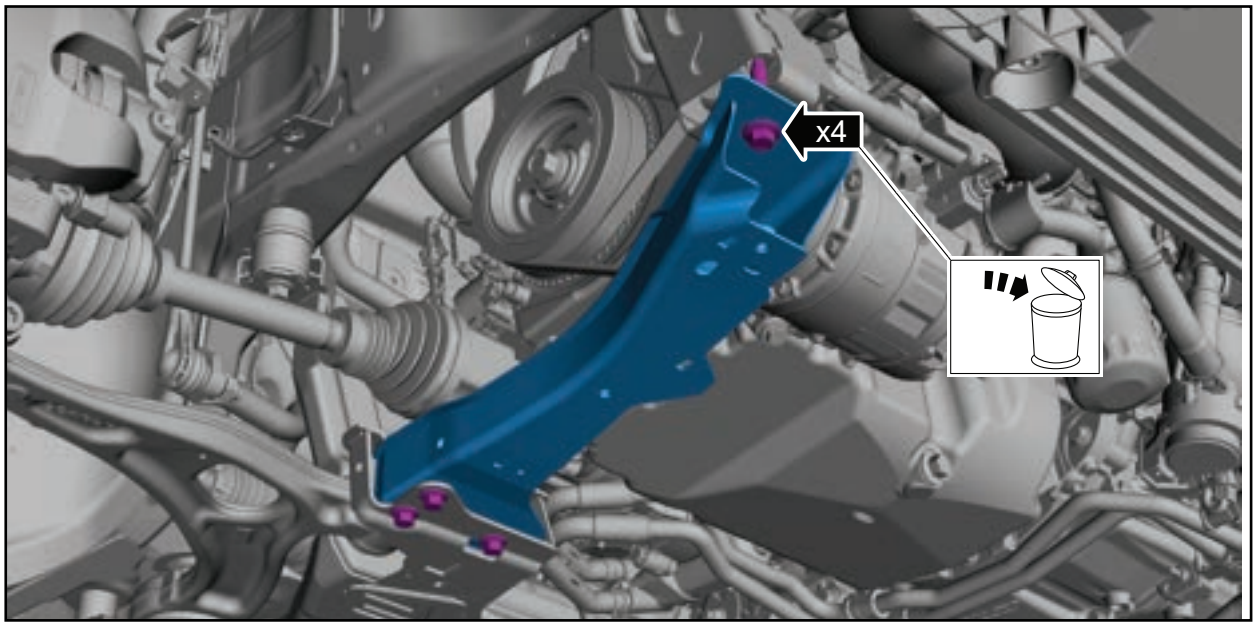
NOTE: The stabilizer bar links are designed with low friction ball joints that have a low breakaway torque.

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



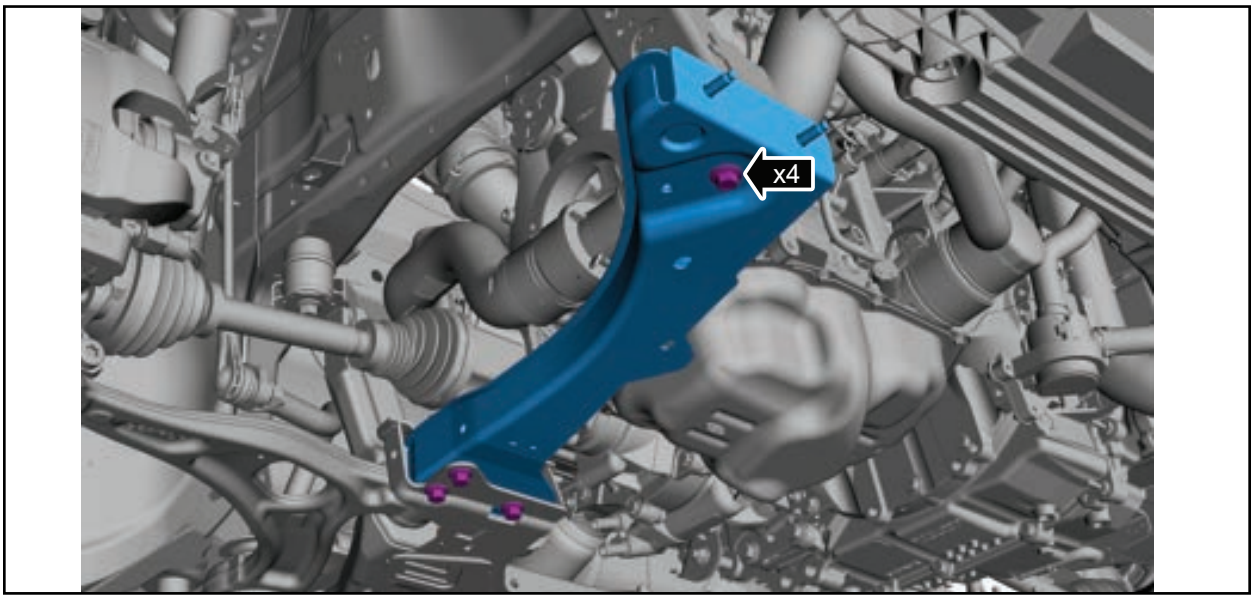
2.0L EcoBoost (177kW/240PS) - MI4

p. Install the front outer side member with new bolts.
- Torque: 22 lb.ft (30 Nm)

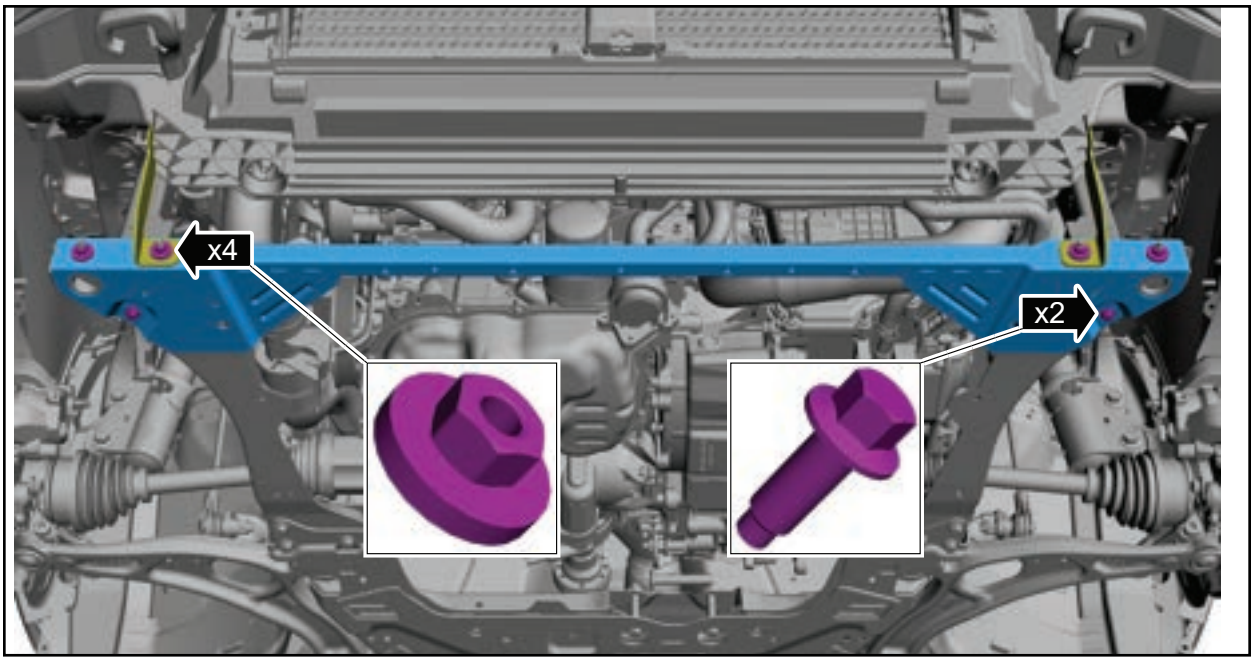


1.5L EcoBoost (132kW/180PS) - I3 (Y1)

q. On both sides, install the front outer side member with new bolts.
- Torque: 22 lb.ft (30 Nm)



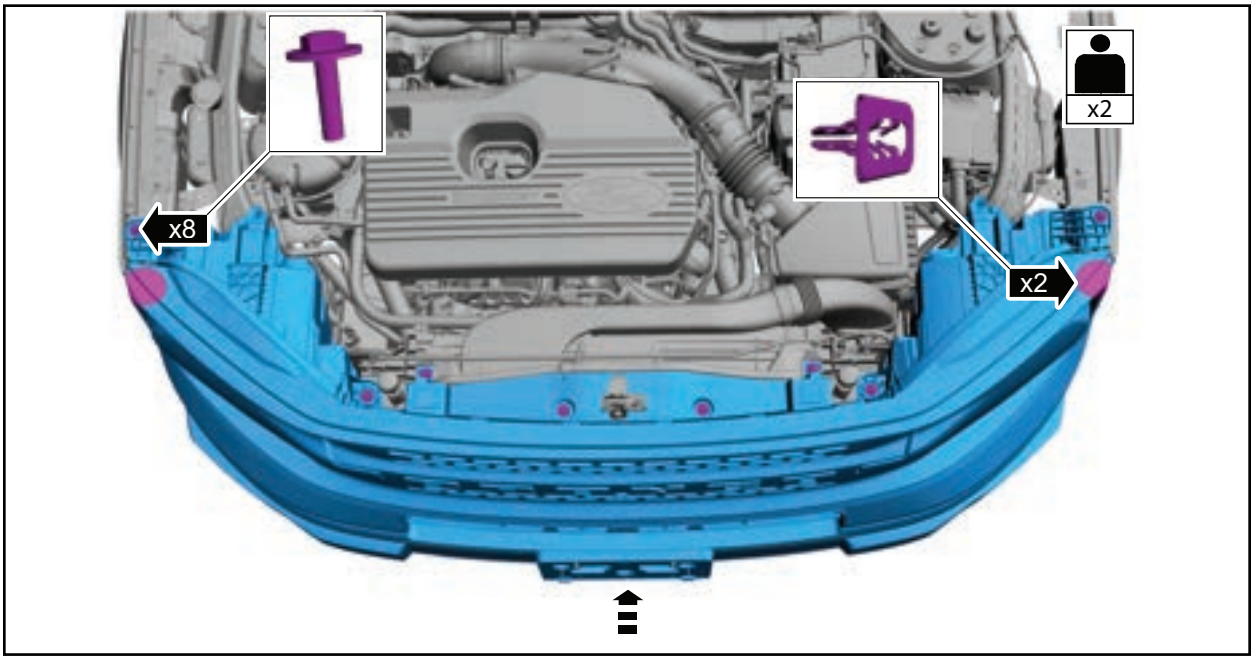
r. On both sides, install the front outer side member with new bolts.
- Torque:
  Nut: 22 lb.ft (30 Nm)
  Bolt: 22 lb.ft (30 Nm)



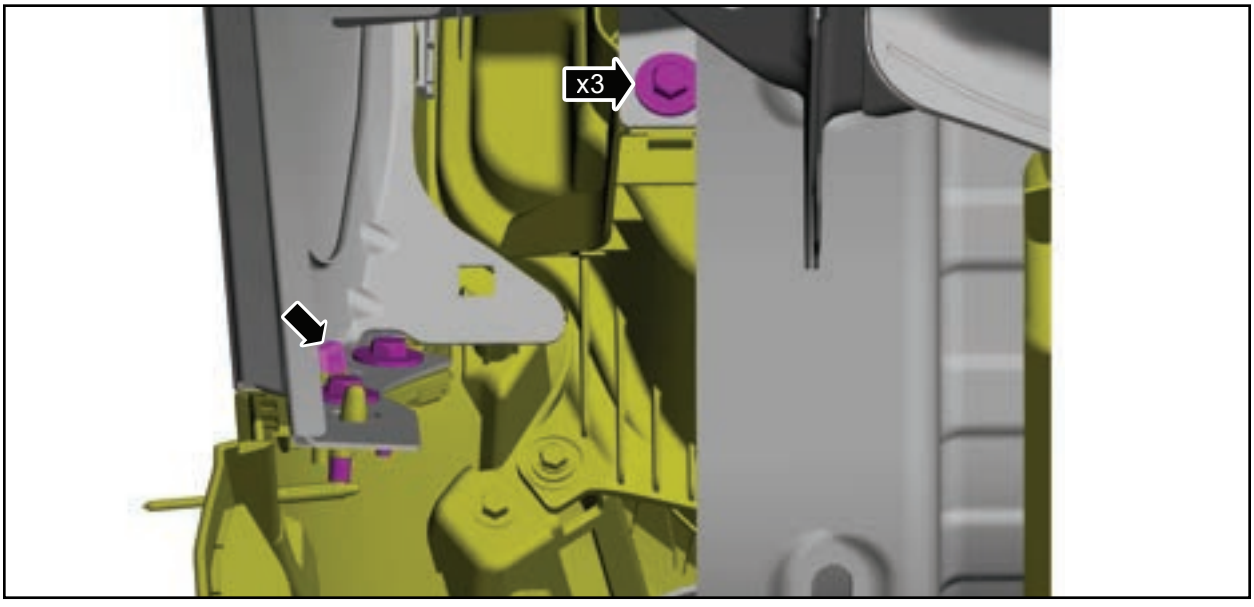
10. Install the front bumper cover.

a. Install the front bumper cover, then install the screws.
- Torque: 35 lb.in (4 Nm)

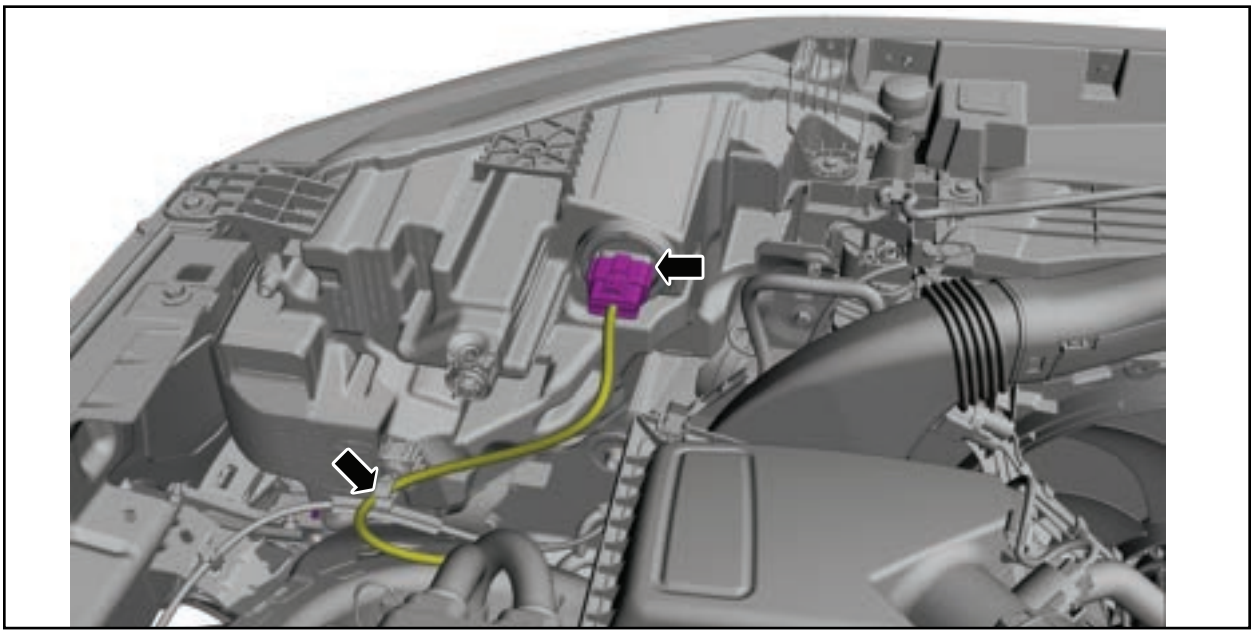
NOTE: This step requires the aid of another technician.



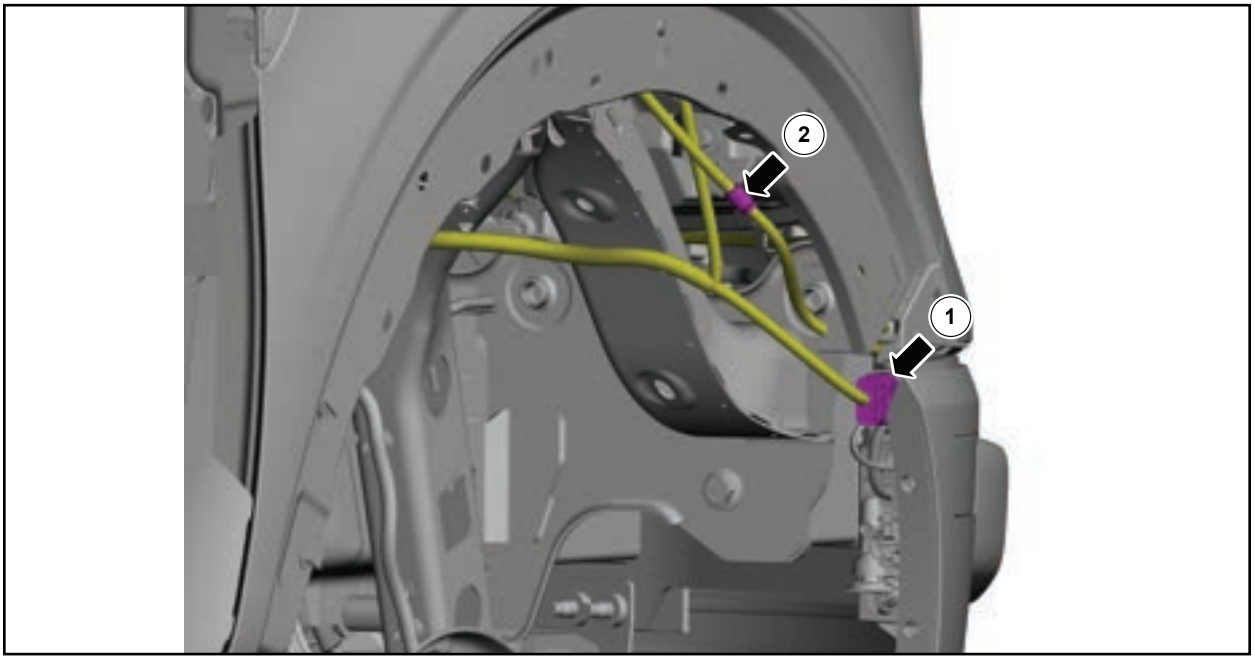
b. On both sides, install the front cover to fender bracket bolts.
- Torque: 62 lb.in (7 Nm)



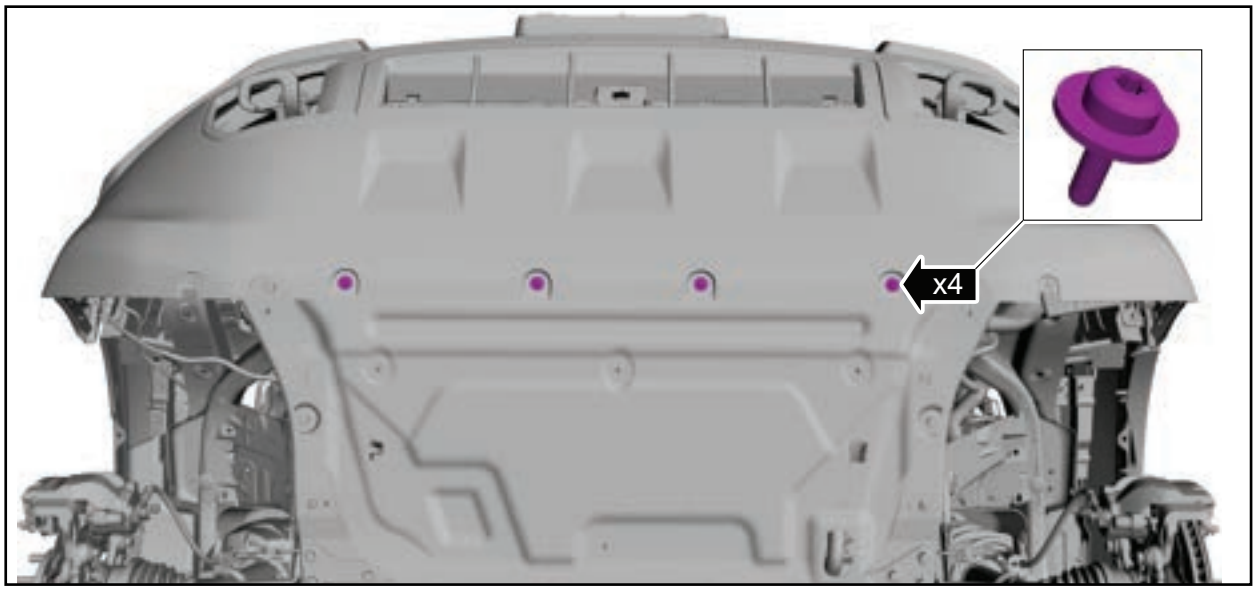
c. On both sides, position the wiring harness in place and connect the headlamp assembly electrical connector.



d. Connect the front bumper cover harness electrical connector and if equipped, connect the camera washer hose.

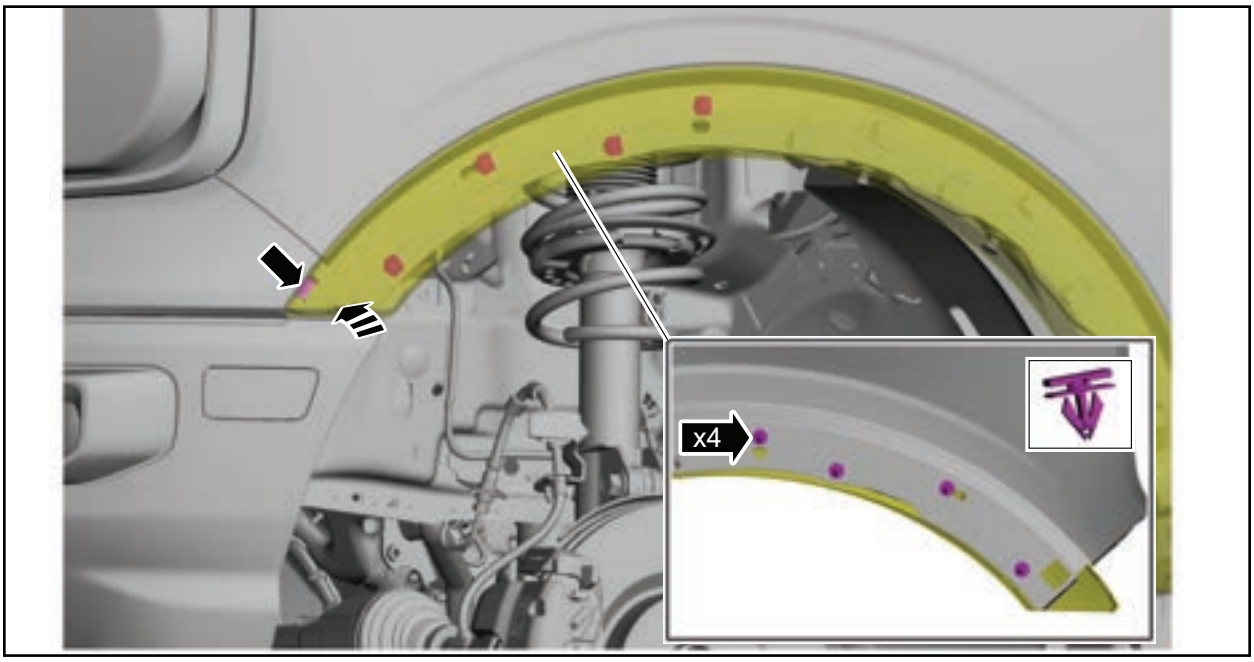


e. If equipped, install the screws.
- Torque: 18 lb.in (2 Nm)

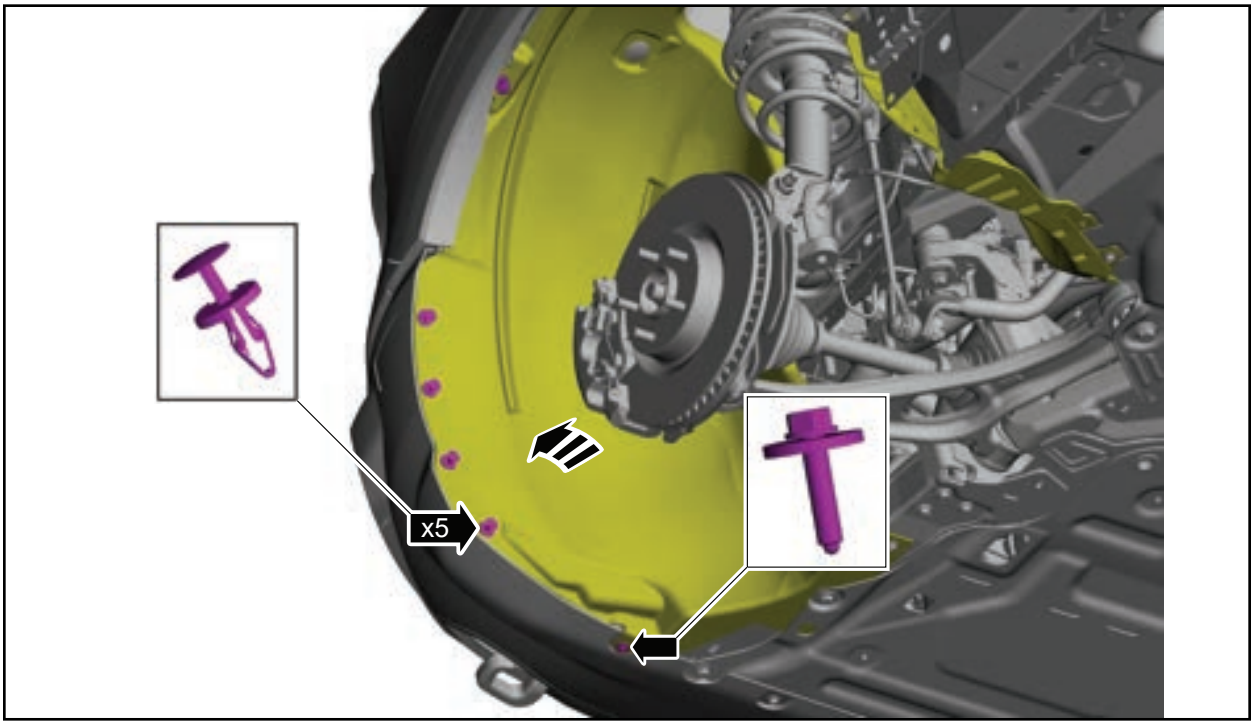


f. Install the screws.
- Torque: 18 lb.in (2 Nm)

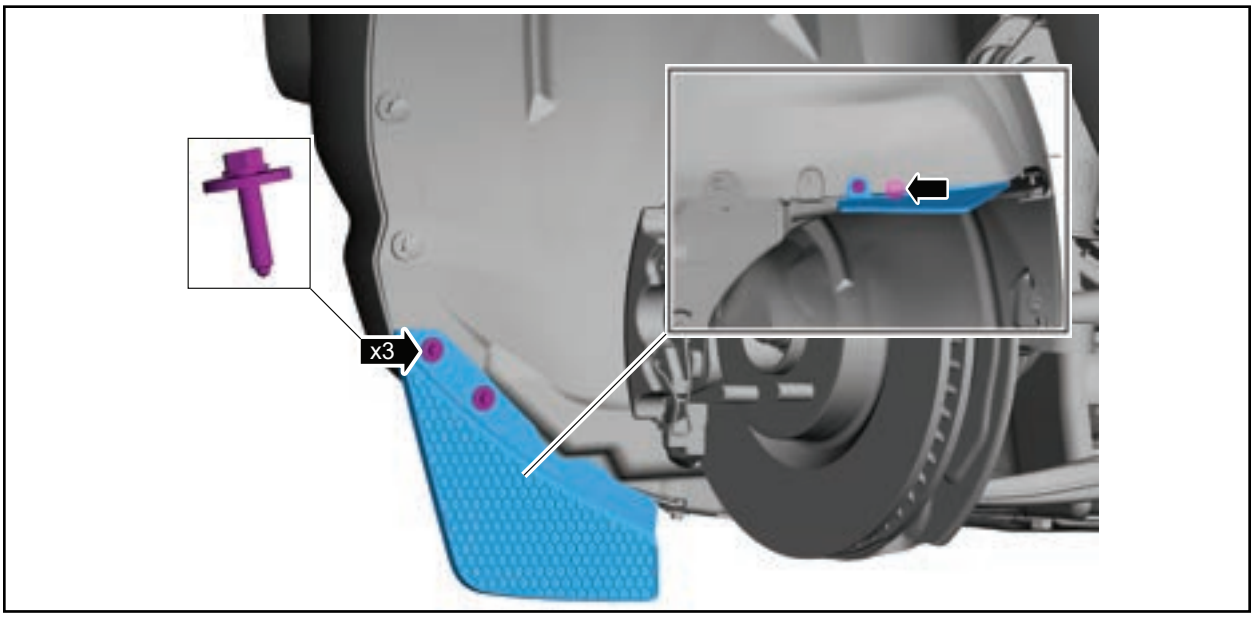
g. On both sides, install the front fender moulding.



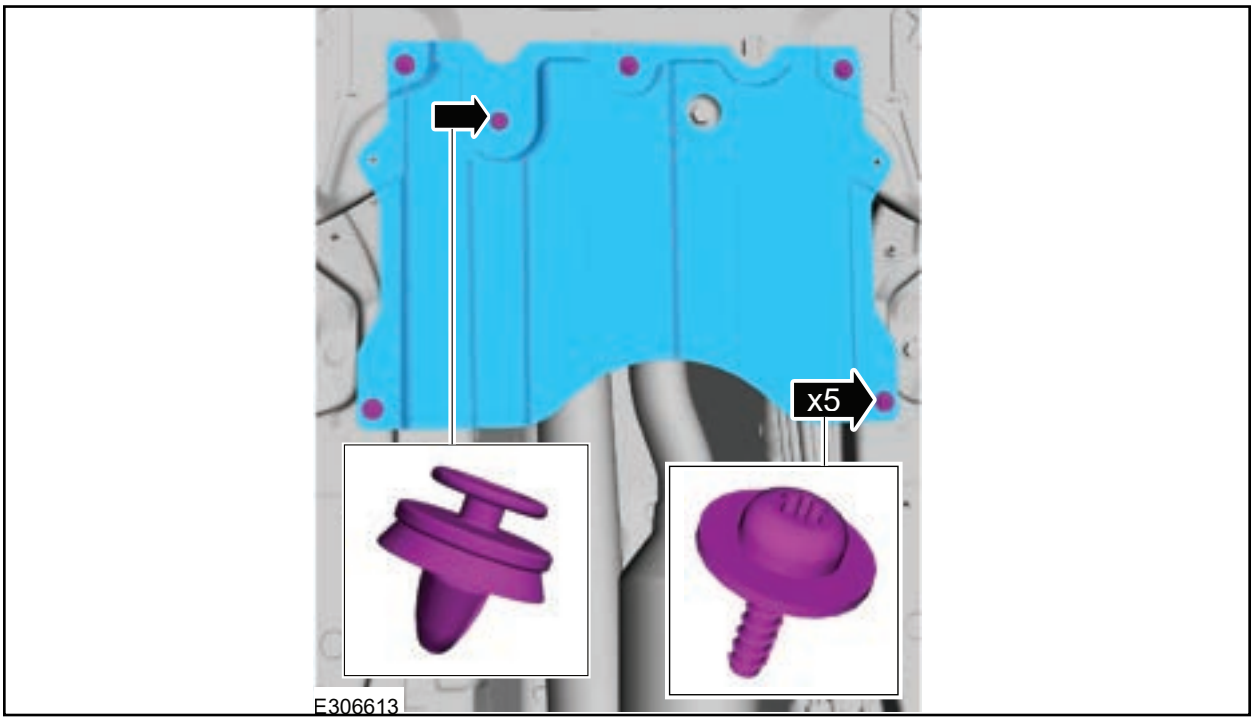
h. On both sides, install the fender liner and push pins. If equipped, instal the screw
• Torque: 18 lb.in (2 Nm)



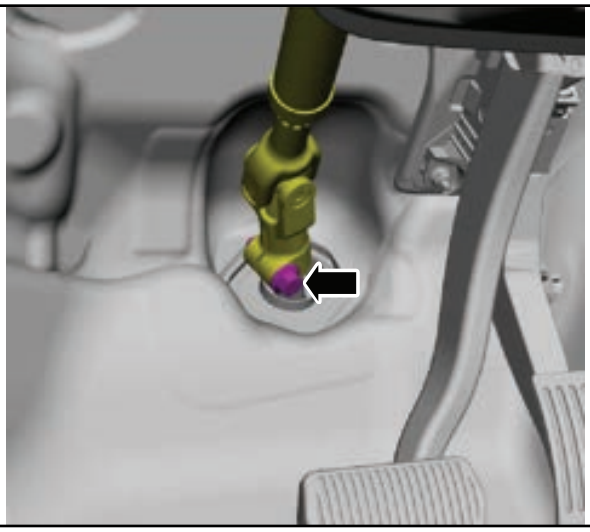
i. If equipped, on both sides install the stone deflector and screws.
• Torque: 18 lb.in (2 Nm)



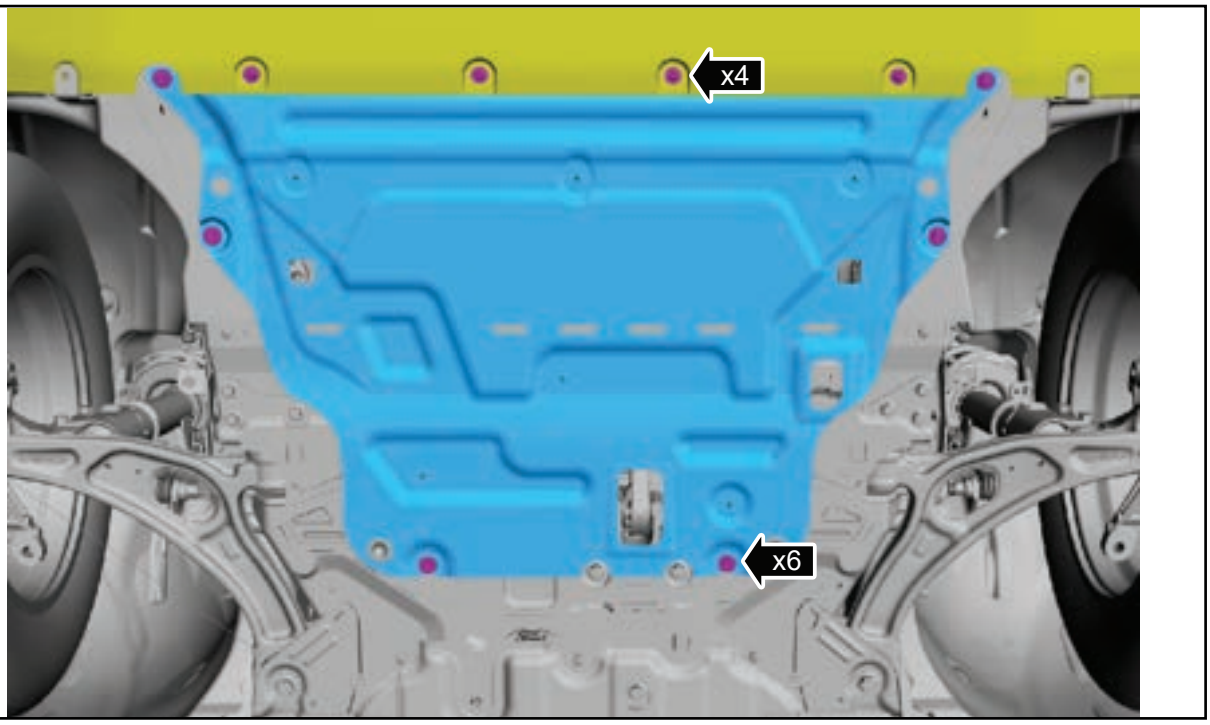
11. Install the underbody shield and the retainers.
• Torque: 22 lb.in (2.5 Nm)



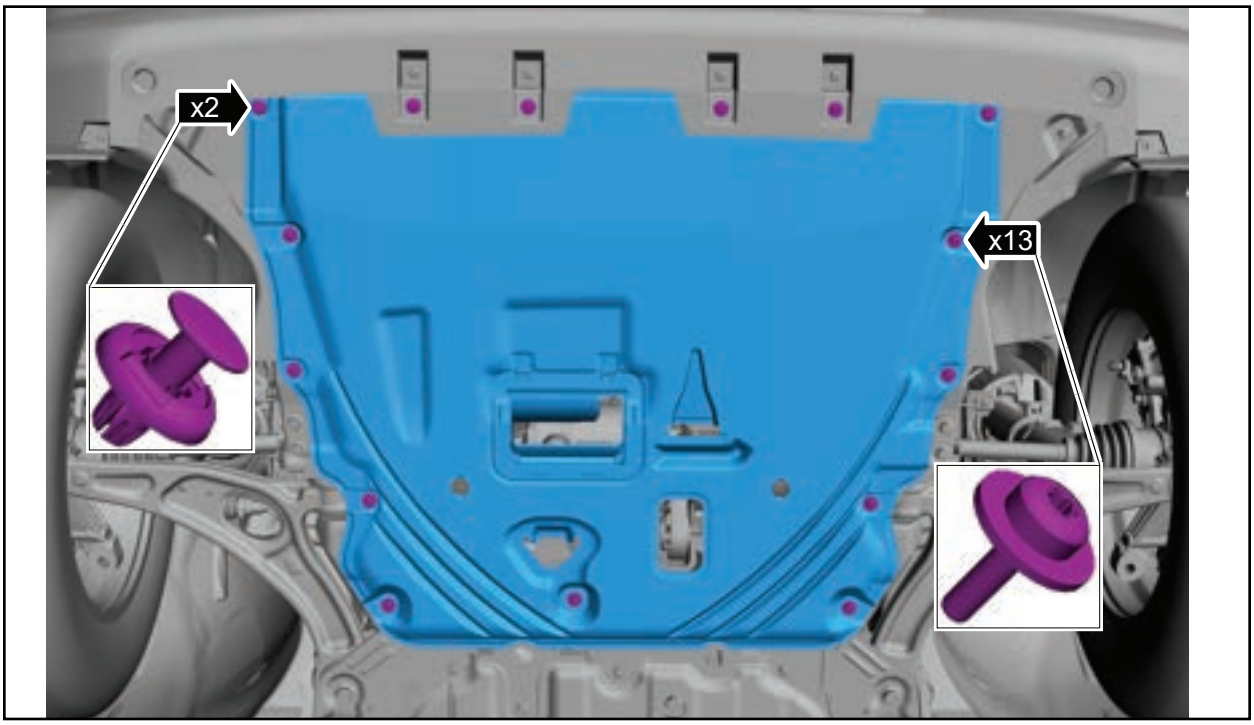
12. Position the steering shaft coupler and install the new steering shaft coupler bolt.
    - Torque: 46 lb.ft (63 Nm)



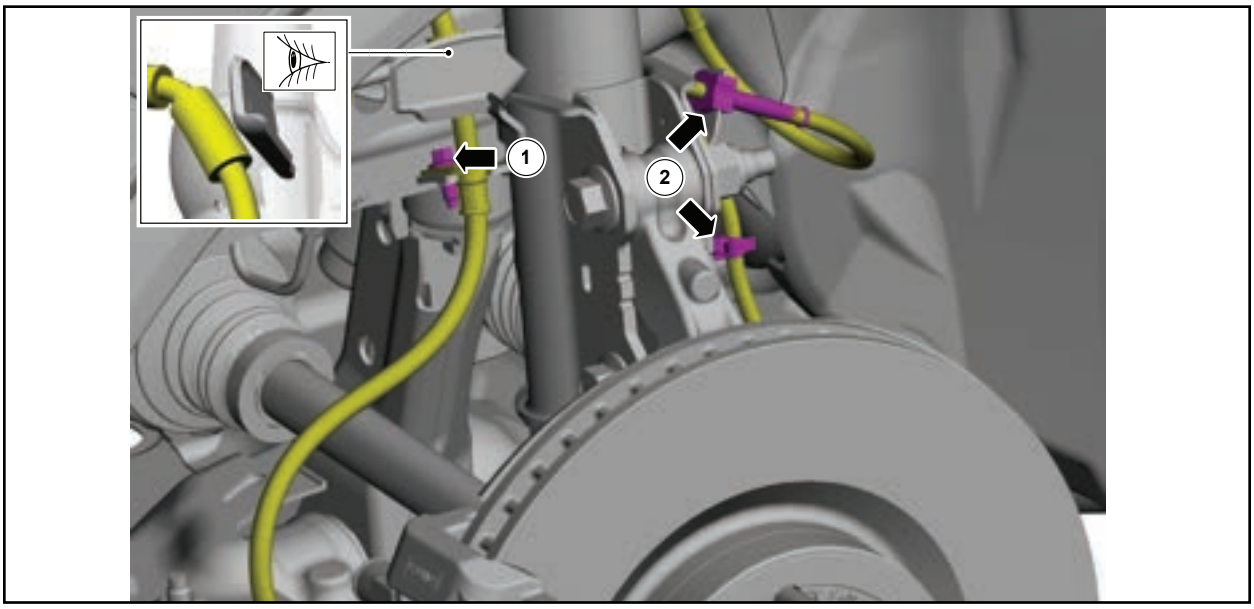
13. If equipped, install the fasteners and the underbody shields.
    - Torque: 13 lb.in (1.5 Nm)



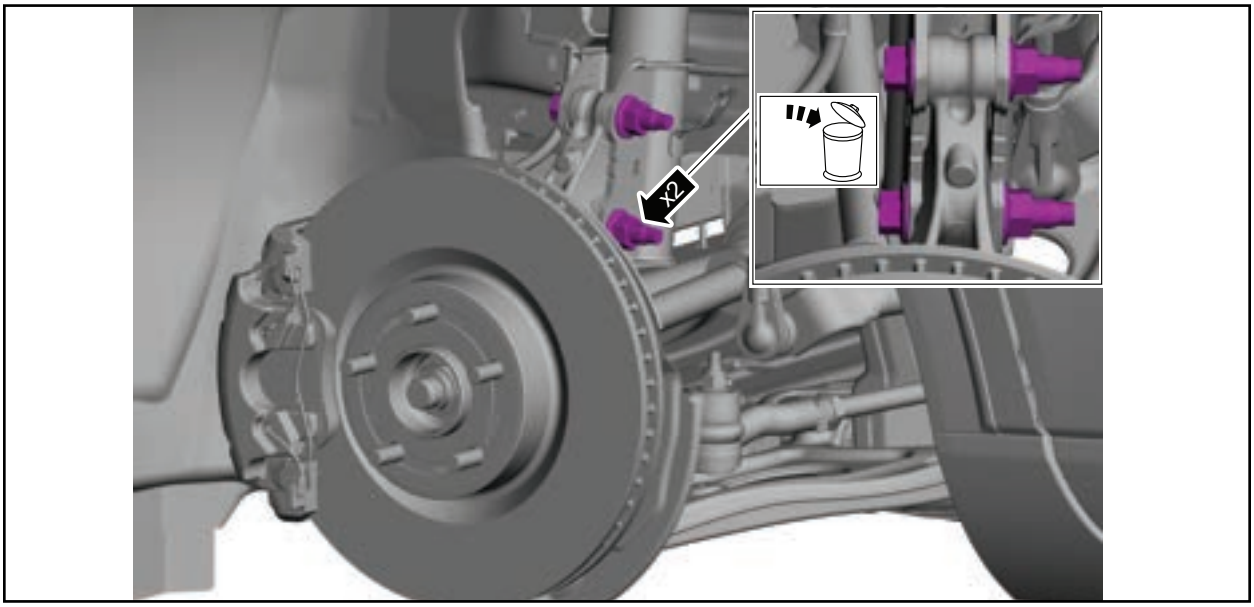
14. If equipped, install the fasteners and the underbody shields.
    - Torque: 13 lb.in (1.5 Nm)



15. Remove the bolt and position aside the brake hose, then unclip the 2 wire retainers and position aside the wheel speed sensor wiring harness.



16. Remove and discard the 2 front strut and spring assembly-to-wheel knuckle bolts and nuts.

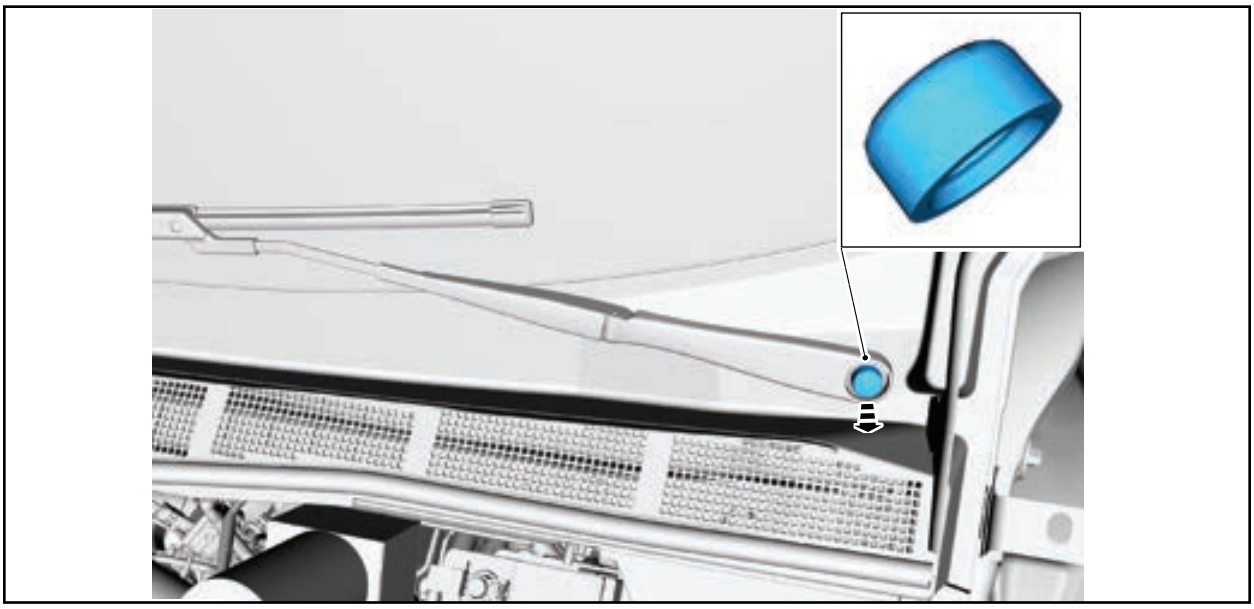


17. Remove the windshield wiper pivot arms.

NOTICE: Do not manually rotate the windshield wiper pivot arms. Damage to the wiper motor or other wiper components may occur.

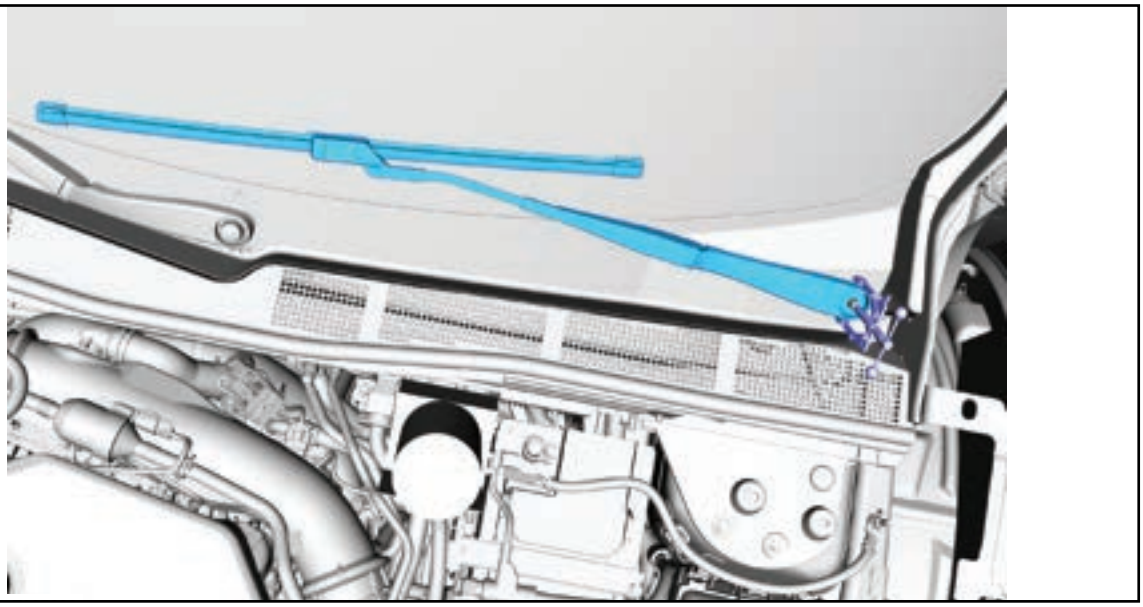
NOTE: LH (left-hand) side shown, RH (right-hand) side similar.

a. Remove both windshield wiper pivot arm nut covers.

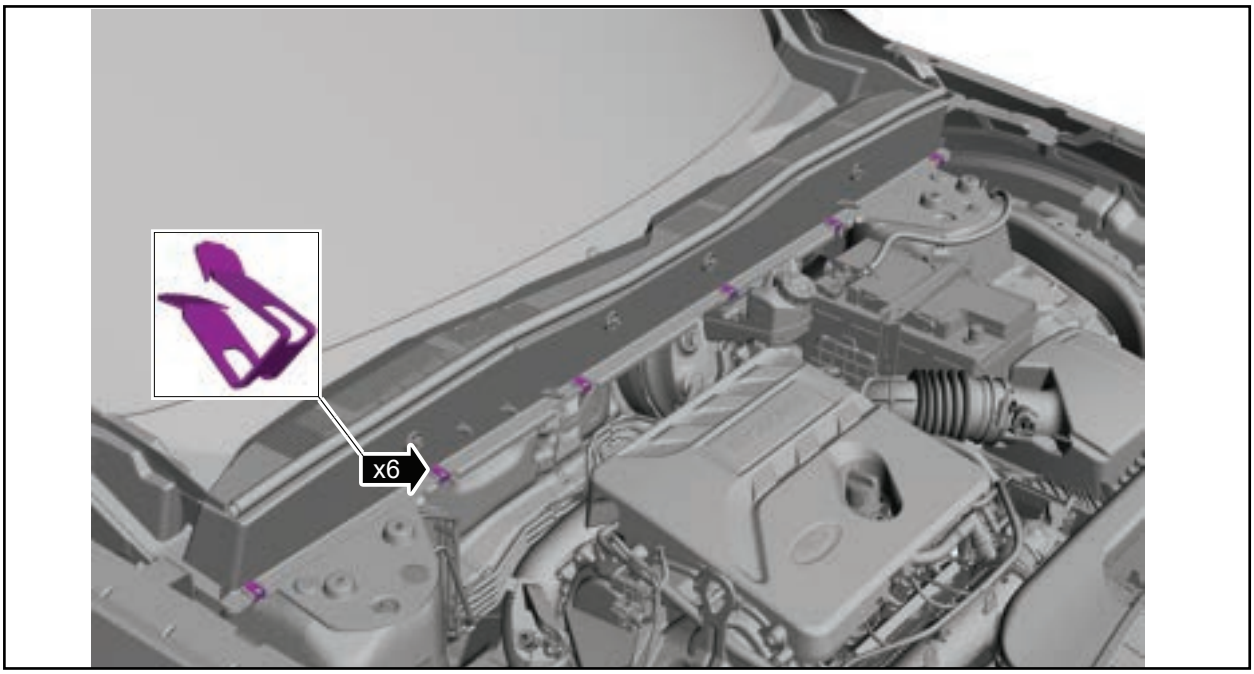


b. Remove both windshield wiper pivot arm nuts.

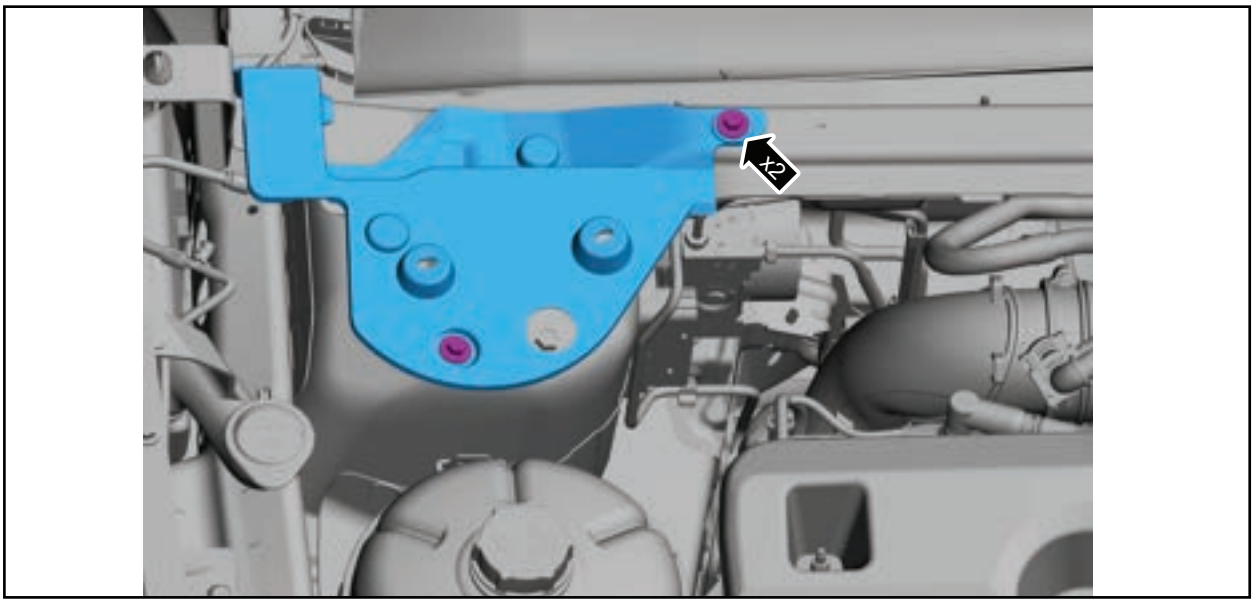
c. Remove both windshield wiper pivot arms.
Use the General Equipment: Two Leg Puller



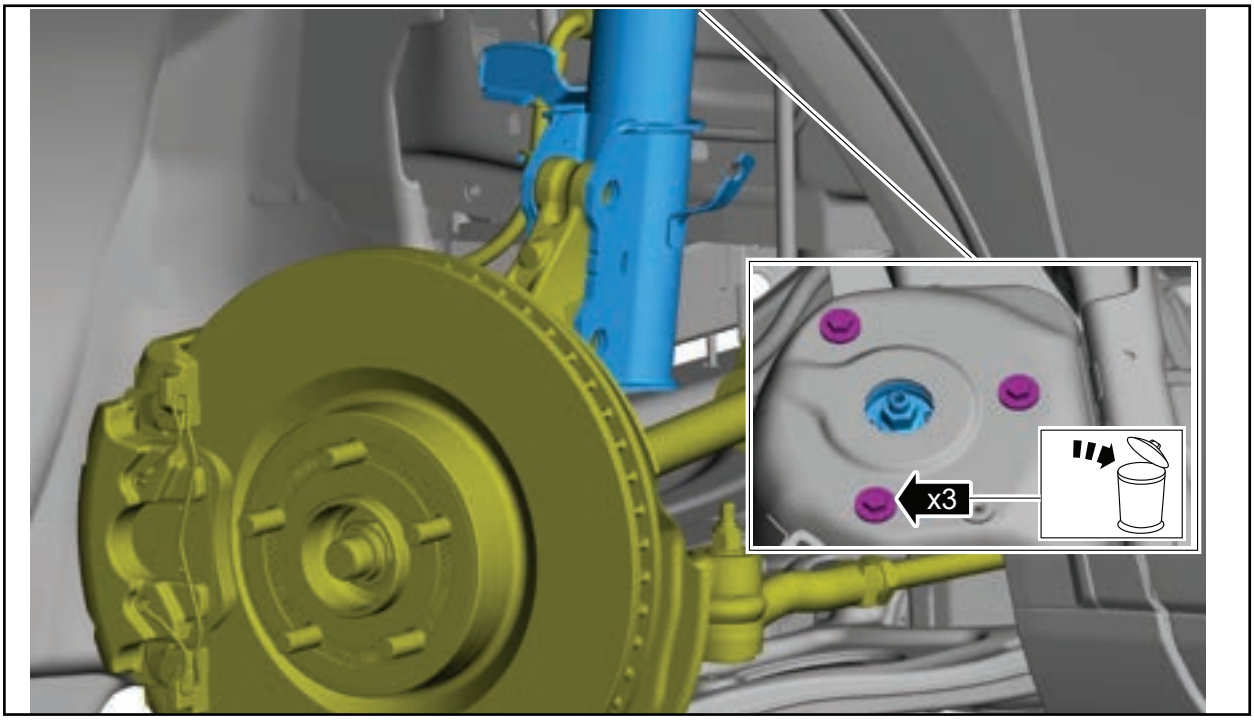
18. Remove the clips, then pull upward on the cowl panel grille and position it aside.



19. Remove cowl panel grille support bracket retainers and bracket.



20. Remove and discard the 3 top front strut and spring assembly mounting bolts.

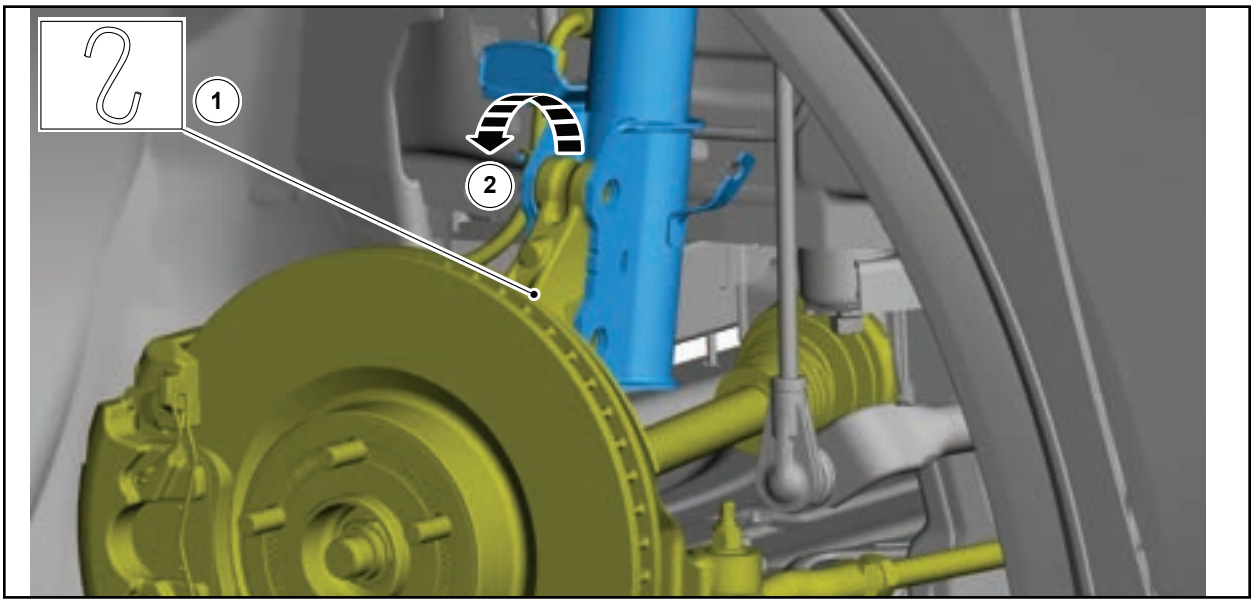


21. Support the wheel knuckle assembly using mechanic's wire, then remove the front strut and spring assembly.

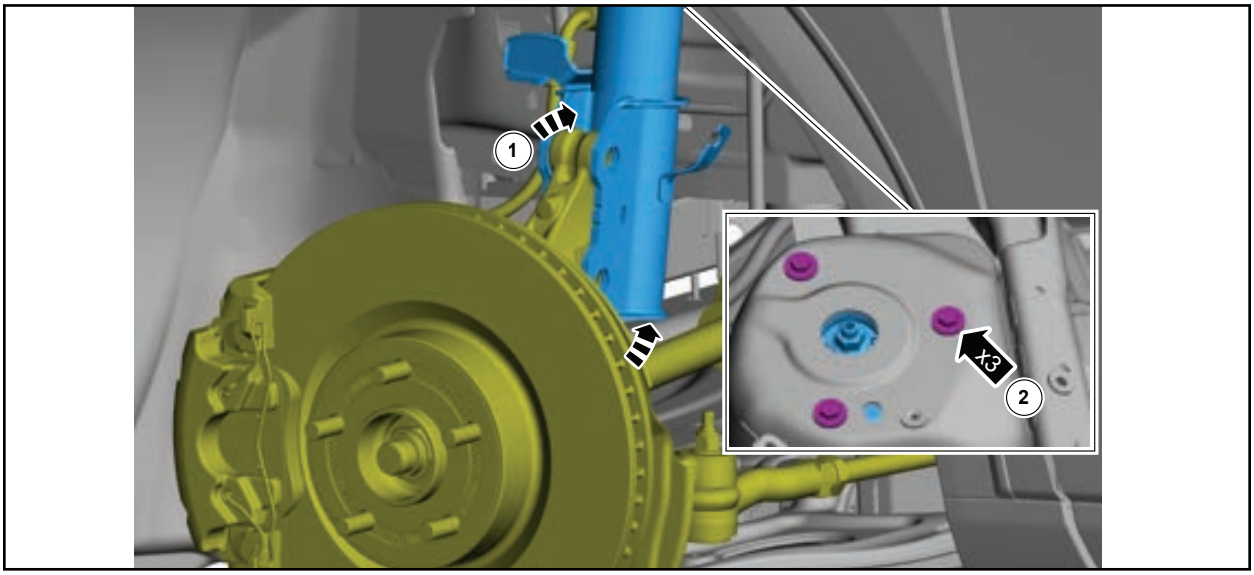
NOTICE: Make sure that no load is placed on the brake hose.

NOTICE: Never allow the knuckle to hang from the upper and lower control arms or damage to the ball joints can occur.

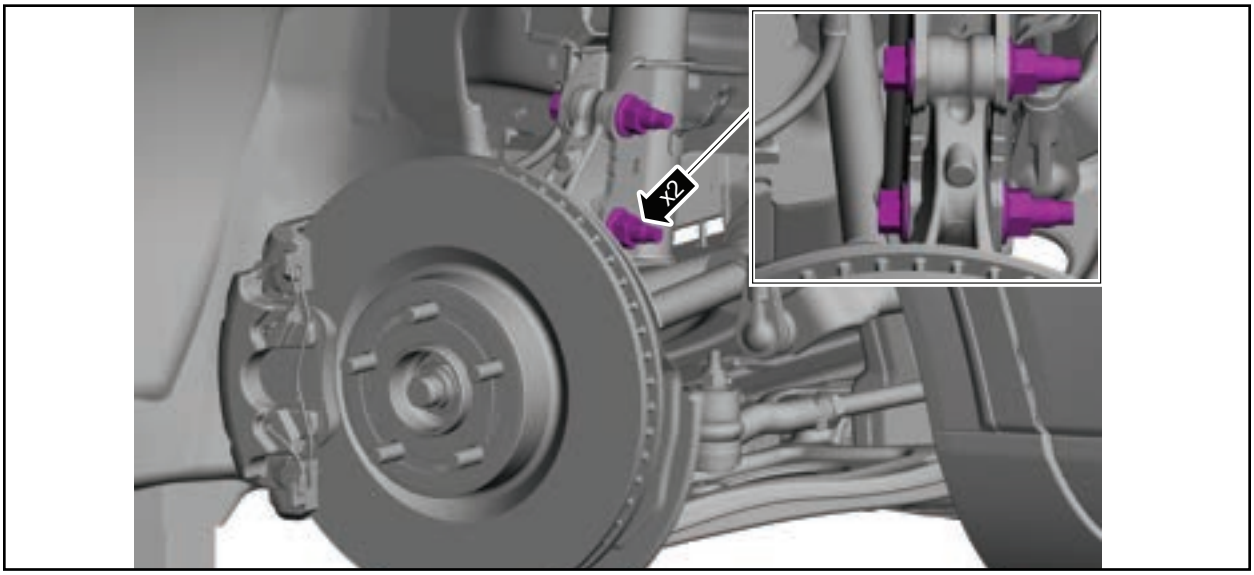
NOTE: Take care not to damage coating on suspension components.



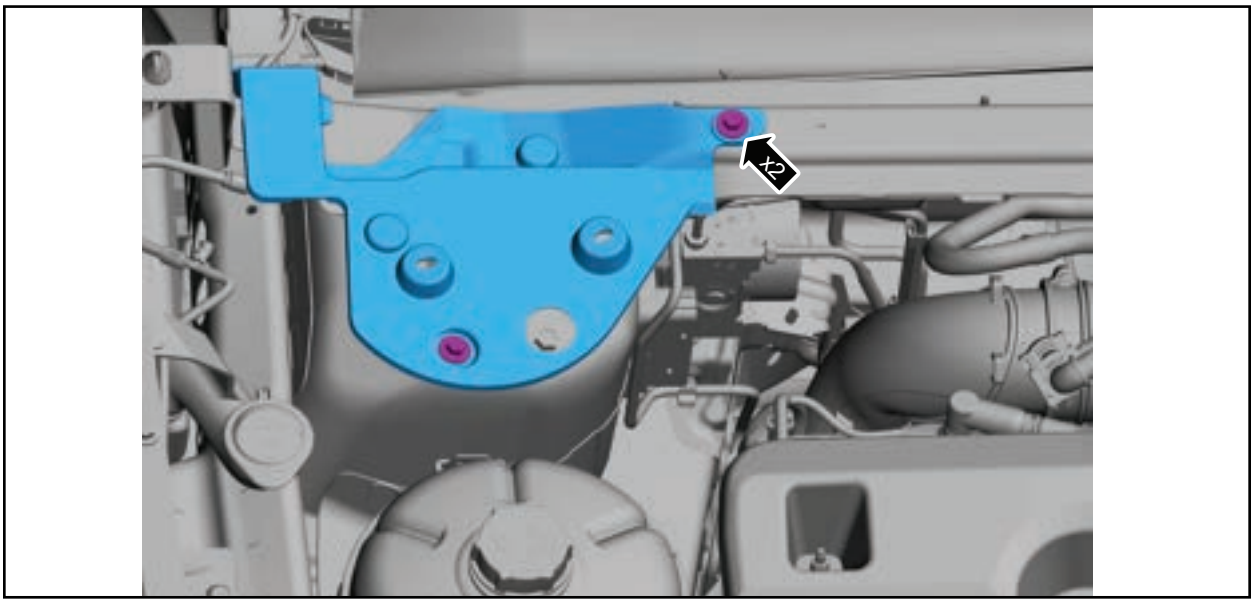
22. Position the front strut and spring assembly into the wheel knuckle, then install the new front strut and spring assembly upper bolts.
    - Torque: 26 lb.ft (35 Nm)



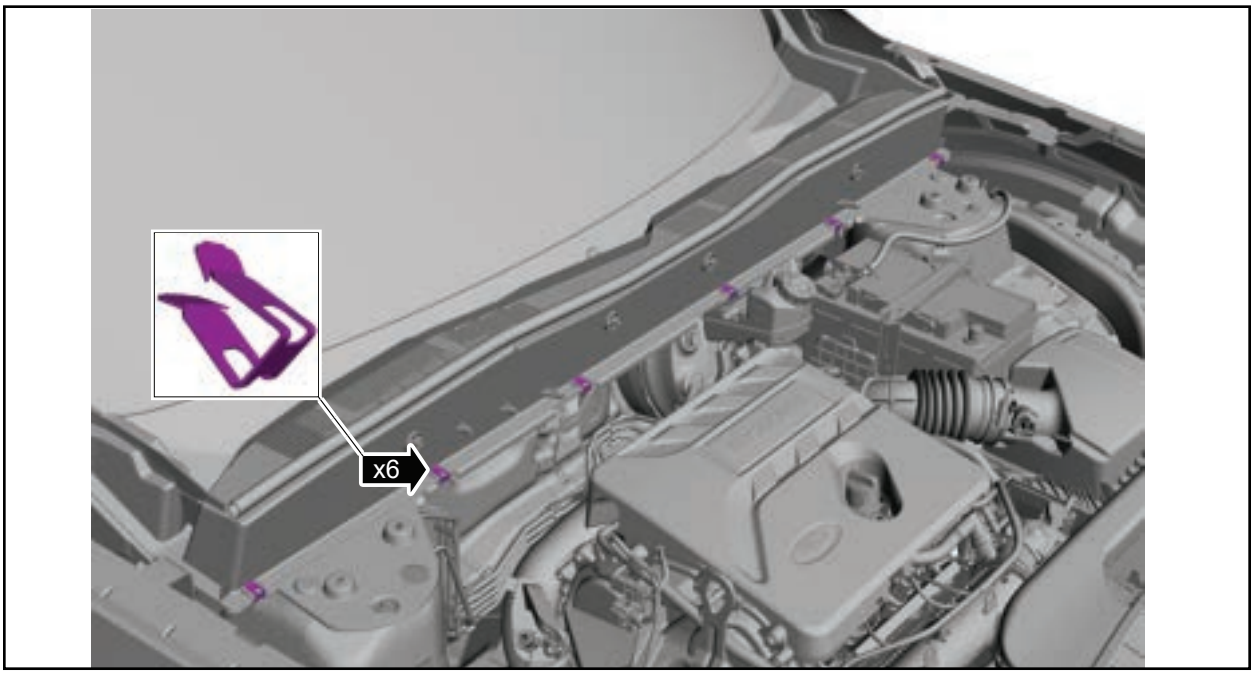
23. Install the new front strut and spring assembly-to-wheel knuckle bolts and nuts.
    - Torque:
      Stage 1: 103 lb.ft (140 Nm)
      Stage 2: 120°



24. Install the cowl panel grille support bracket and retainers.
    - Torque: 13 lb.in (1.5 Nm)

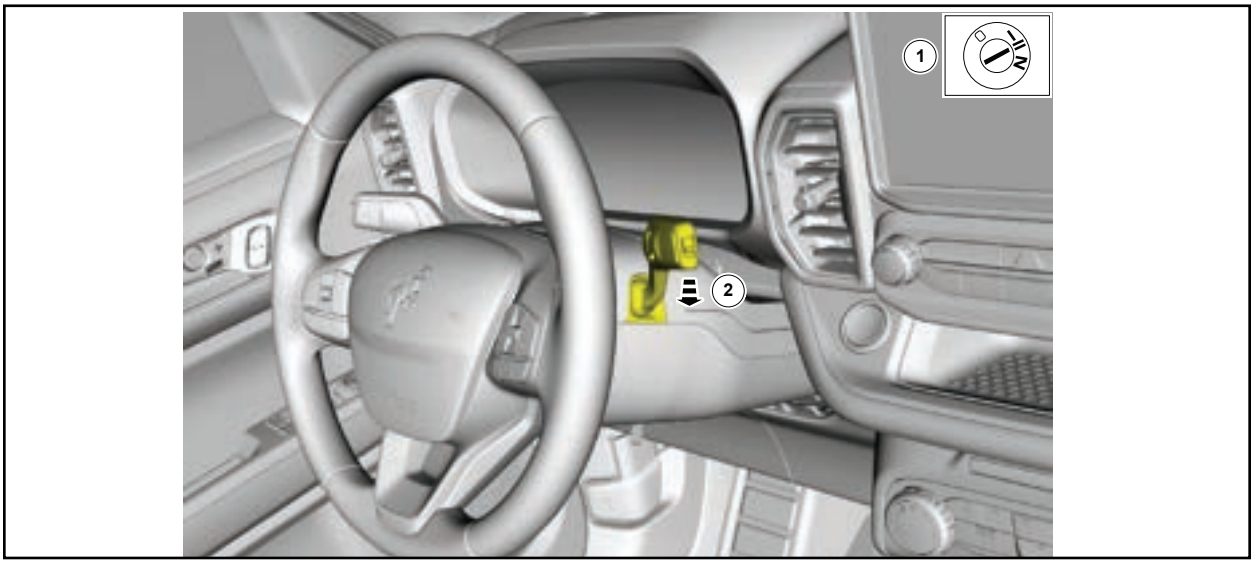


25. Position the cowl panel grille back in place and install the clips.

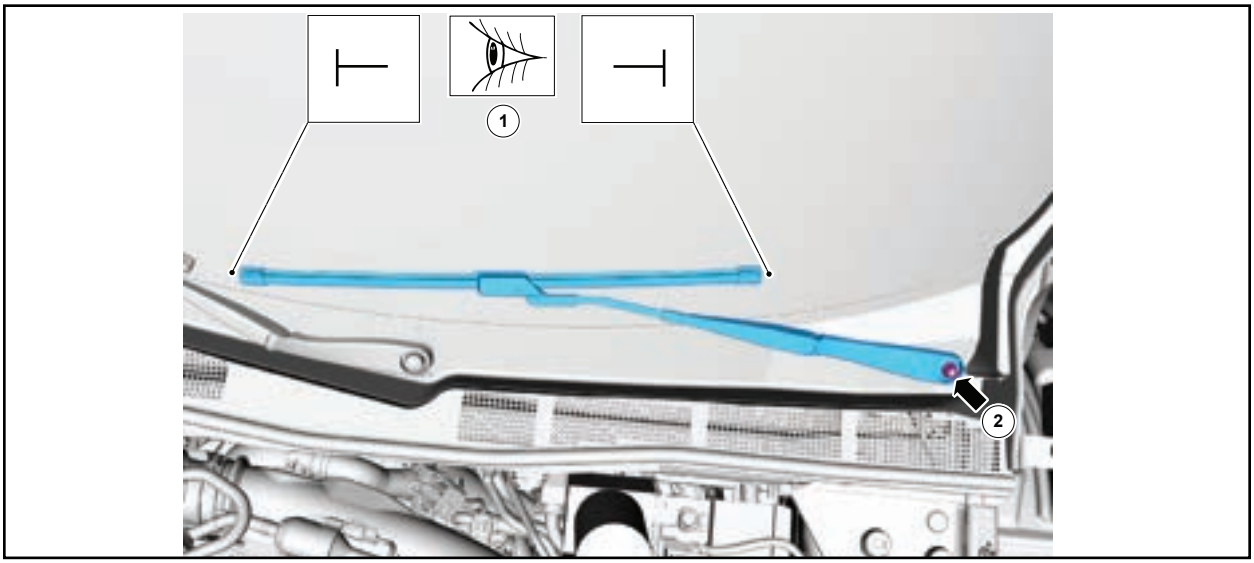


26. Install the windshield wiper pivot arms.

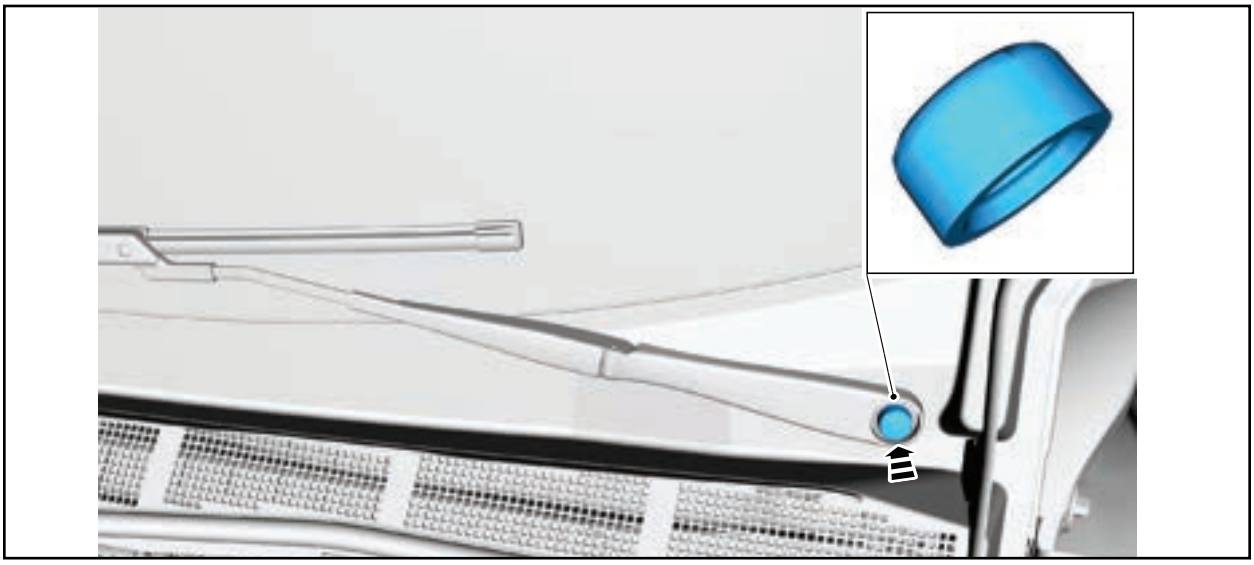
a. Verify the windshield wiper motor is in the PARK position.
   1. Turn the ignition ON.
   2. Pull the switch down to cycle the windshield wiper motor.



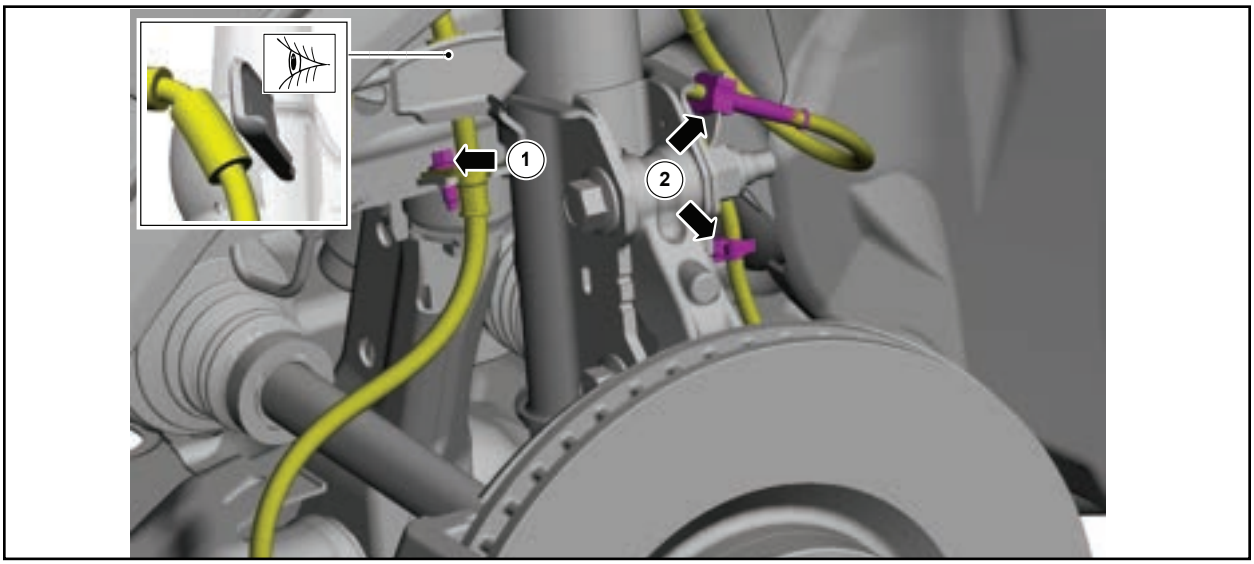
b. Install the wiper pivot arms.
   1. Align the wiper blade with the marks on the windshield.
   2. Install the wiper pivot arm nut.
      • Torque: 18 lb.ft (25 Nm)



c. Install the windshield wiper pivot arm nut covers.



27. Position the brake hose and install the bolt, then position the wheel speed sensor wiring harness and clip the 2 wire retainers.
    • Torque: 13 lb.in (1.5 Nm)

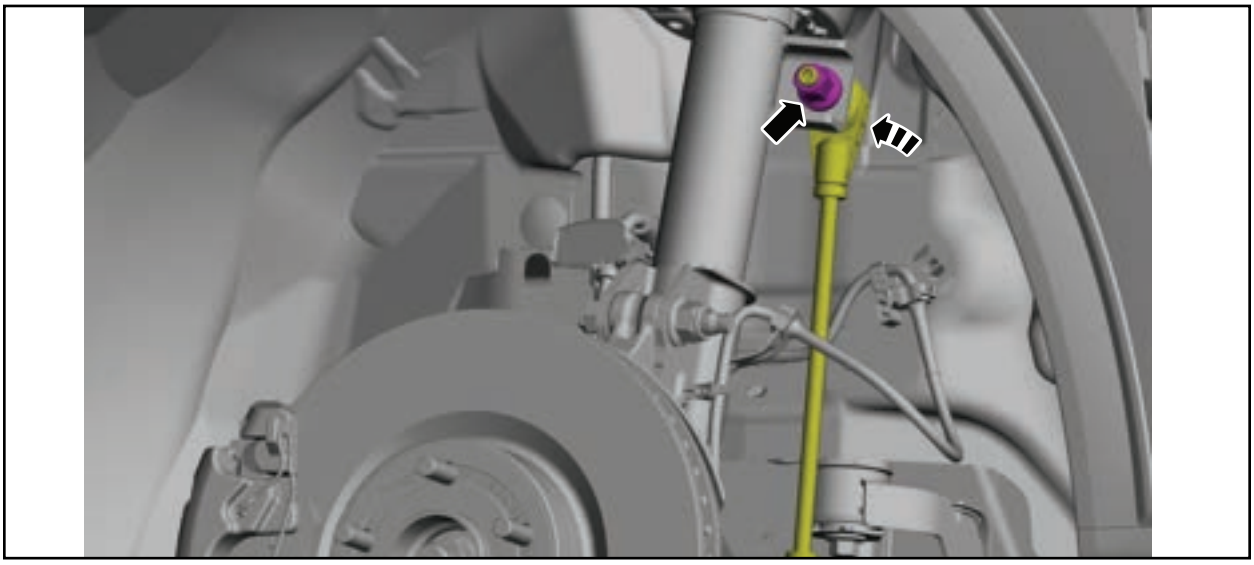


28. Position the front stabilizer bar link and install the new front stabilizer bar link upper nut.
    • Torque: 81 lb.ft (110 Nm)

NOTICE: Do not use power tools to remove or install the stabilizer bar link nuts. Damage to the stabilizer bar link ball joints and boots may occur.

NOTE: Use the TORX PLUS® holding feature to prevent the ball stud from turning while removing or installing the lower arm outboard nut. Torx® and TORX PLUS® is a reg. tm of Acument Intellectual Properties, LLC.

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

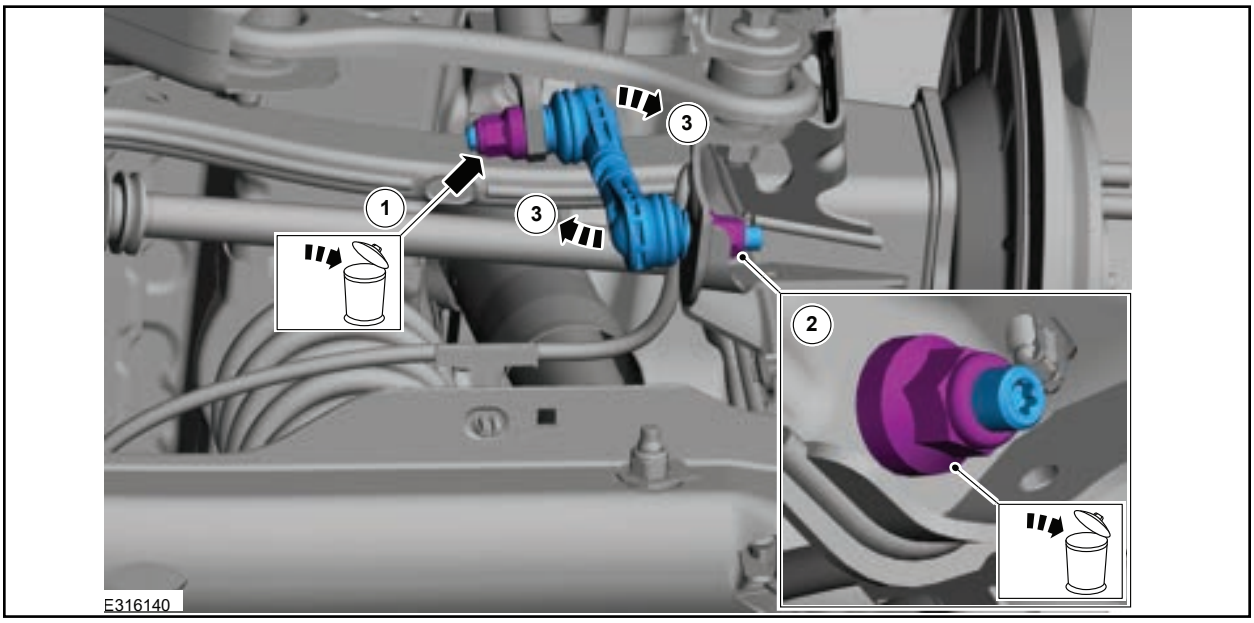


29. Remove and discard the rear stabilizer link upper nut and lower nut, then remove the rear stabilizer bar link.

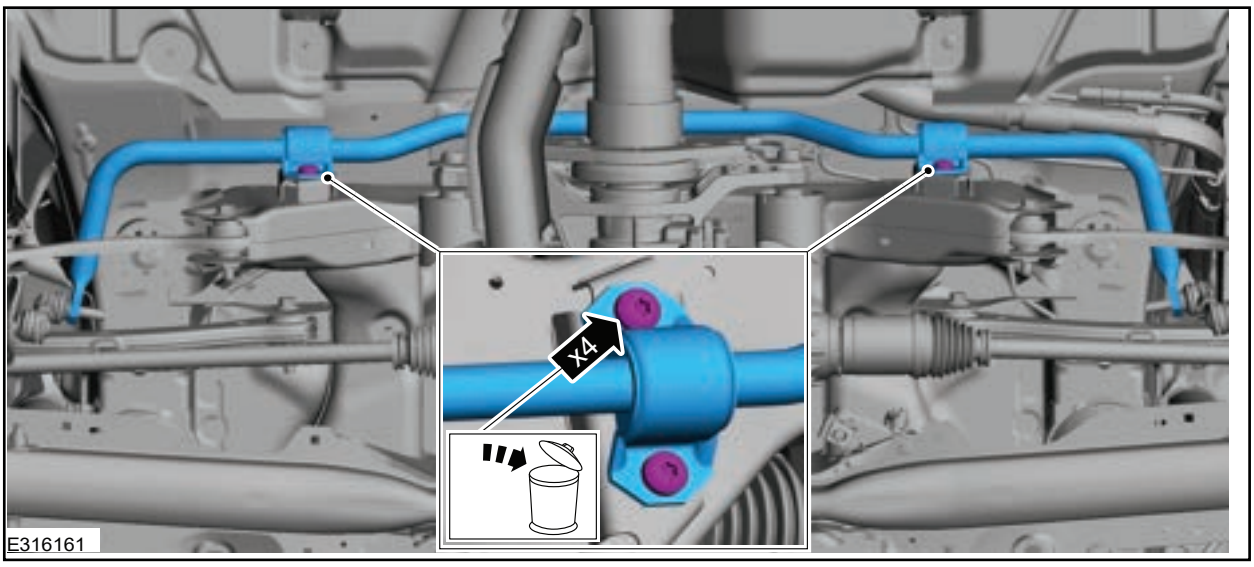
NOTICE: Do not use power tools to remove or install the stabilizer bar link nuts. Damage to the stabilizer bar link ball joints and boots may occur.

NOTE: Use the TORX PLUS® holding feature to prevent the ball stud from turning while removing or installing the lower arm outboard nut. Torx® and TORX PLUS® is a reg. tm of Acument Intellectual Properties, LLC.

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

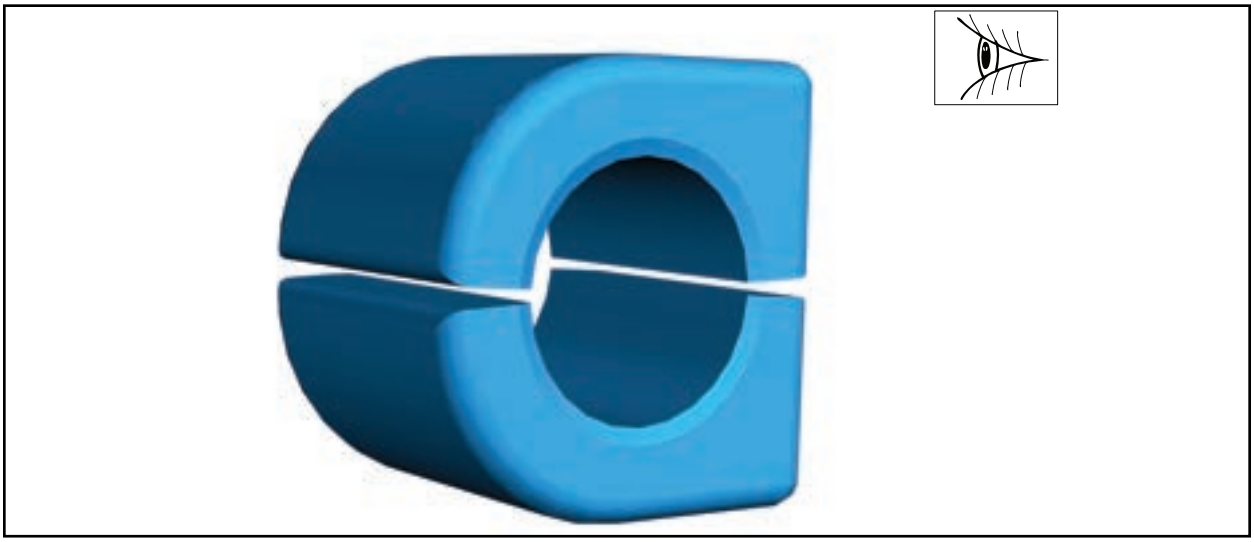


30. Remove and discard the 4 stabilizer bar bracket bolts and remove the stabilizer bar.



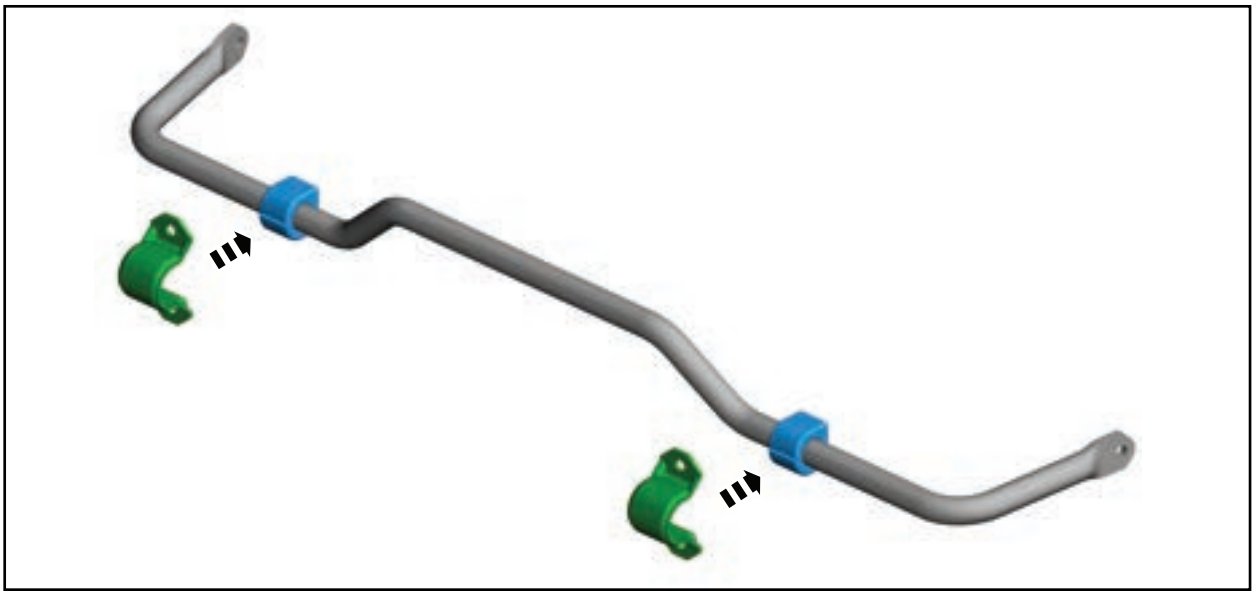
31. Inspect and if necessary install new stabilizer bar bushings.

NOTICE: Do not use any lubrication on the stabilizer bar or the bushings or damage to the bushings may occur.

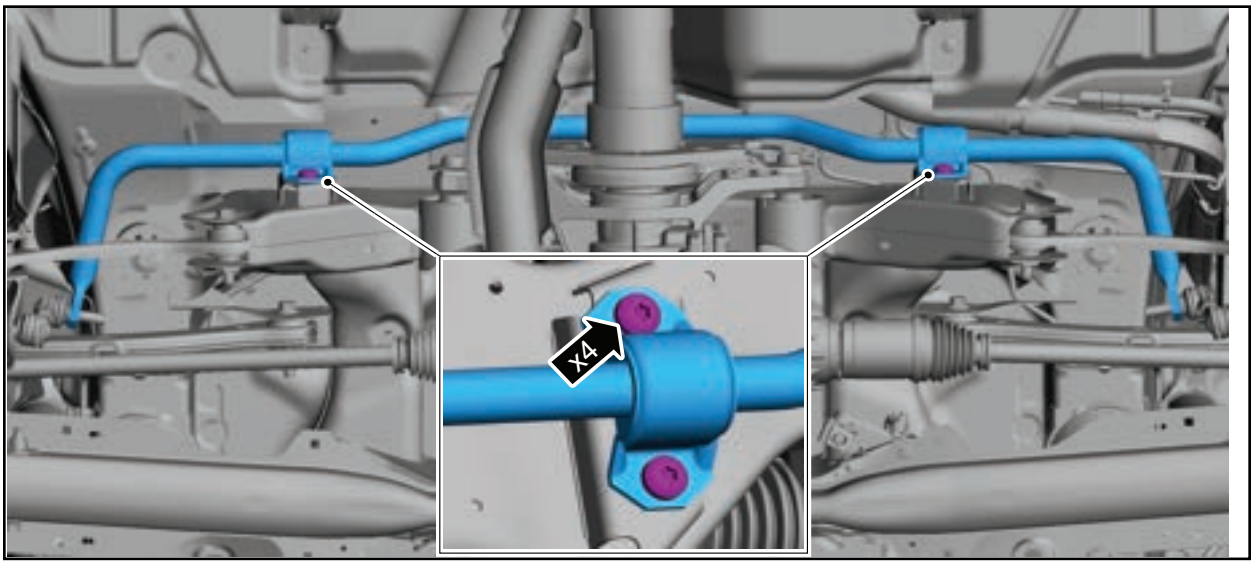


32. Press the rear stabilizer bar brackets in place on to the rear stabilizer bar bushings.

NOTE: Apply water to the brackets to aid in installation.



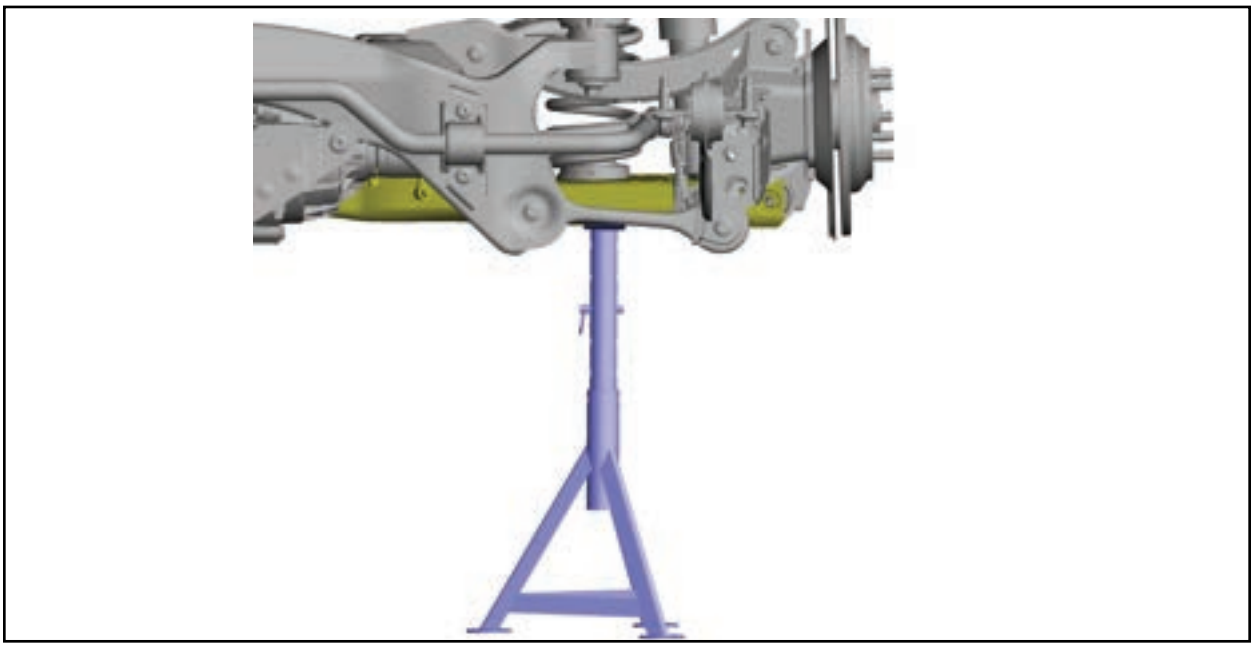
33. Install the *new* stabilizer bar and the 4 *new* stabilizer bar bracket bolts.
    - Torque: 46 lb.ft (63 Nm)



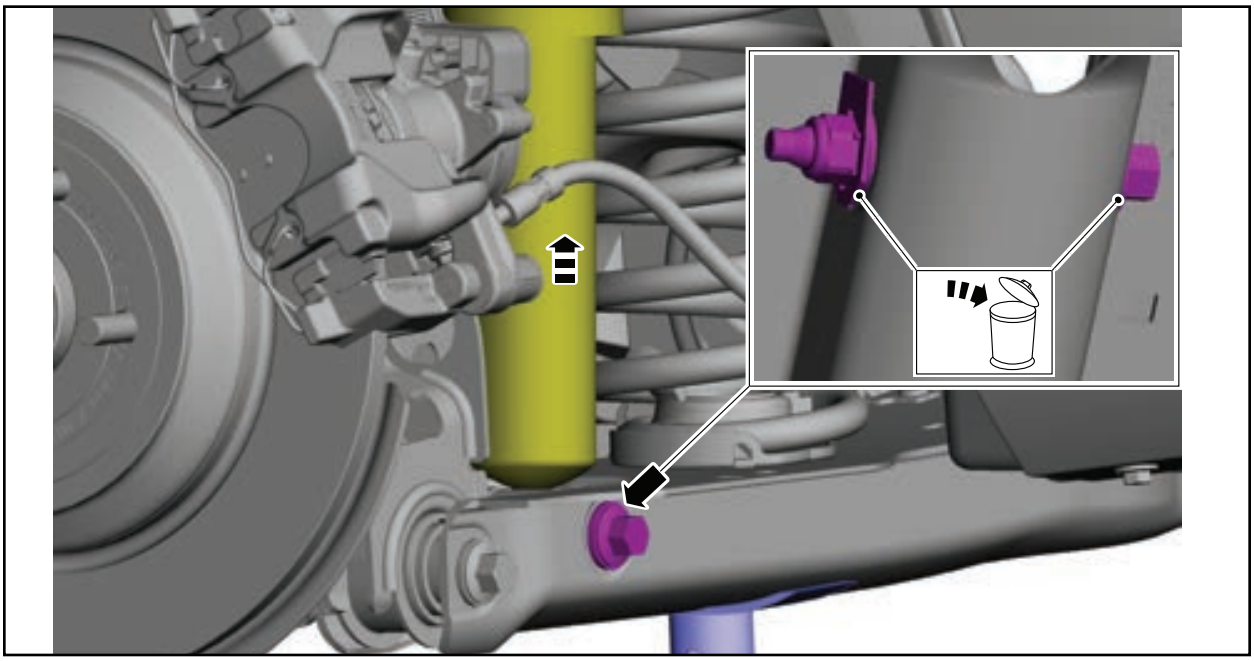
34. Support the rear suspension using an axle stand.
    Use the General Equipment: Vehicle/Axle Stands

NOTICE: Do not attempt to jacking on the front control arm or rear control arm on any vehicle. Damage to control arms may occur.

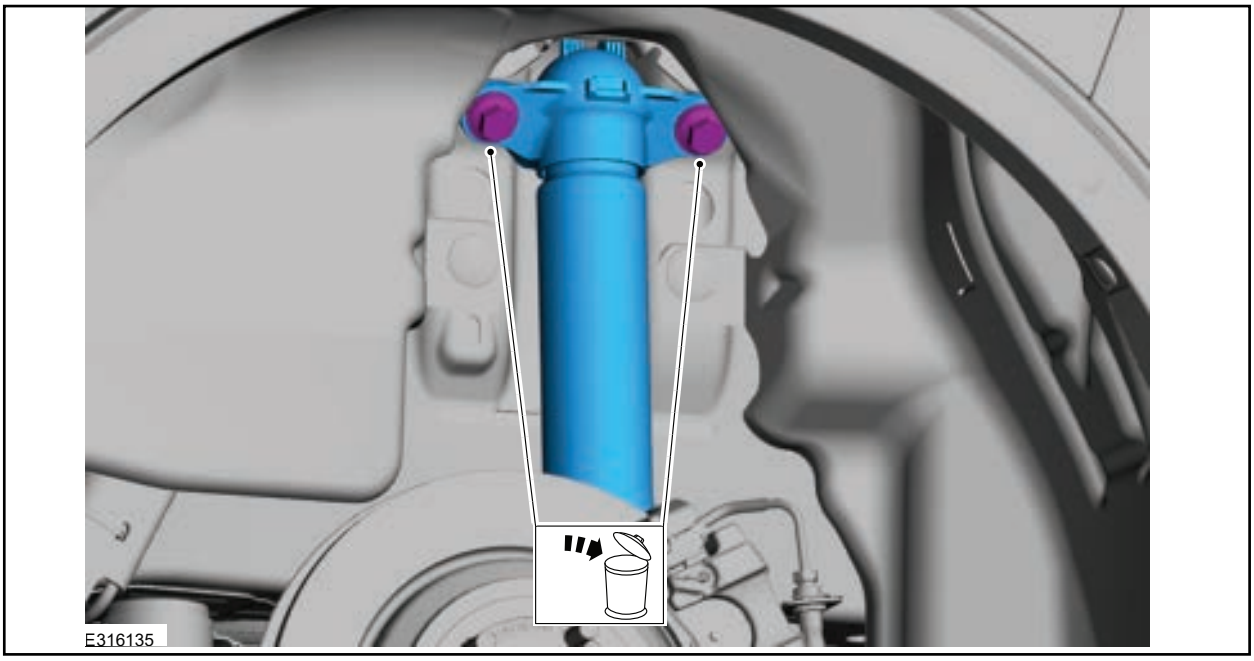
NOTICE: Make sure that the insulator pads are correctly positioned to prevent direct contact with other components.



35. Remove and discard the lower shock absorber bolt and nut.



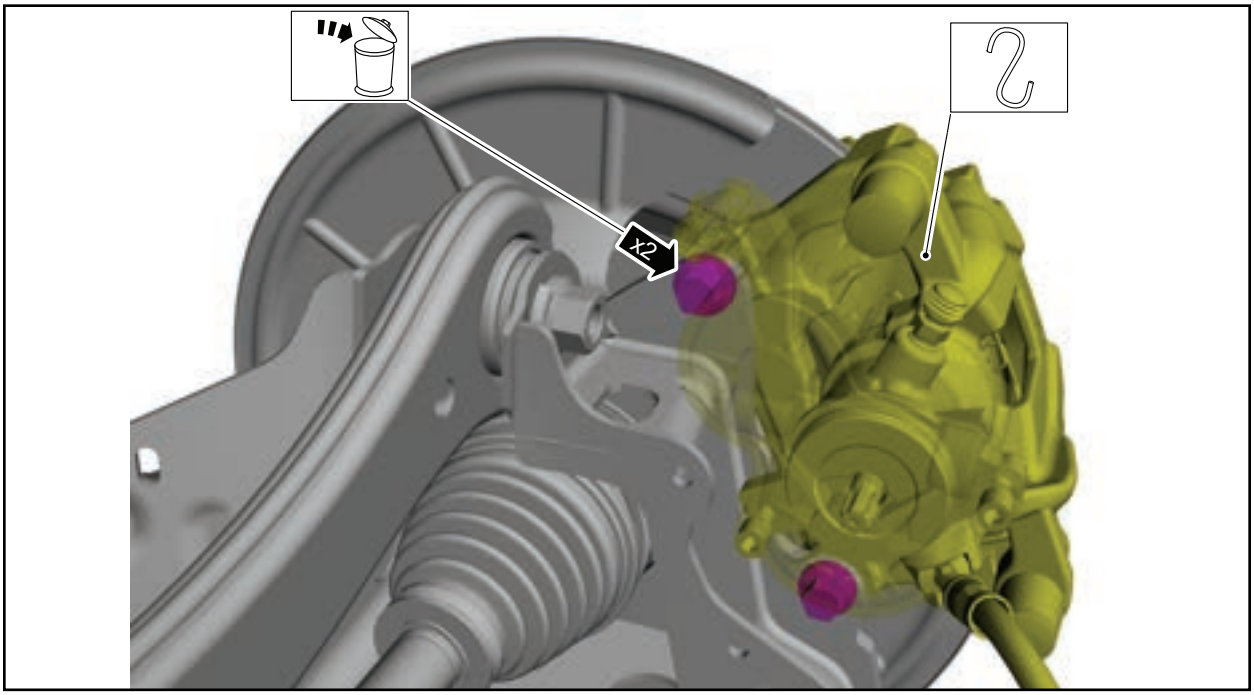
36. Remove and discard the rear shock absorber upper bolts and remove the rear shock absorber.



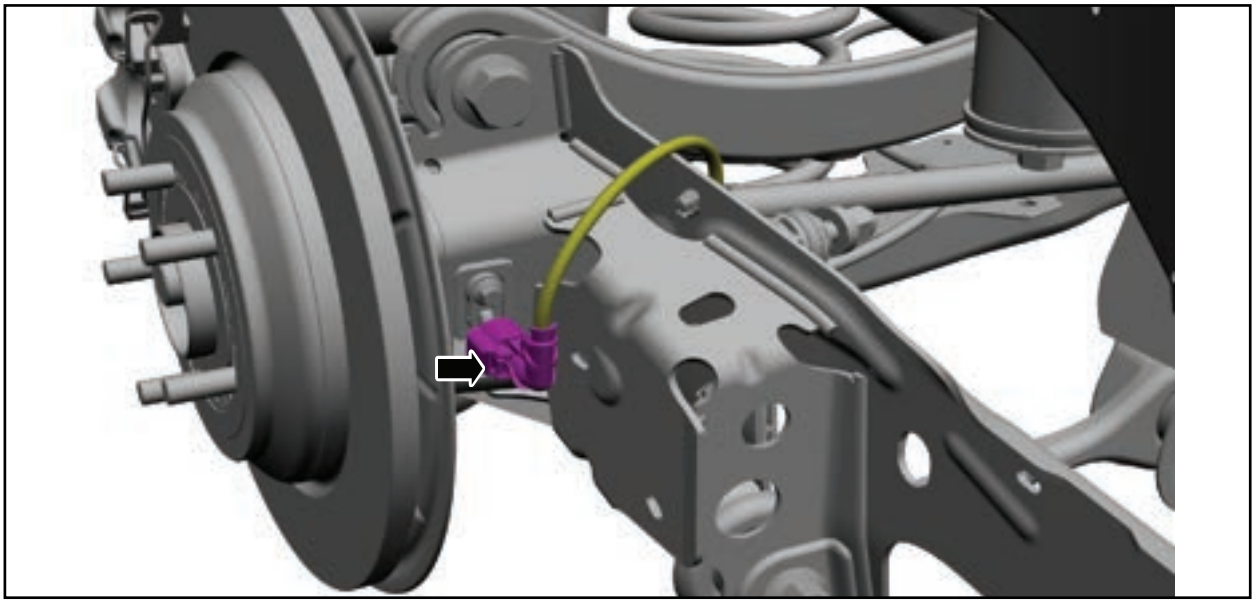
37. Remove the bolts and position the brake caliper and anchor plate assembly aside. Discard the bolts.

NOTICE: Do not pry in the caliper sight hole to retract the pistons as this can damage the pistons and boots.

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

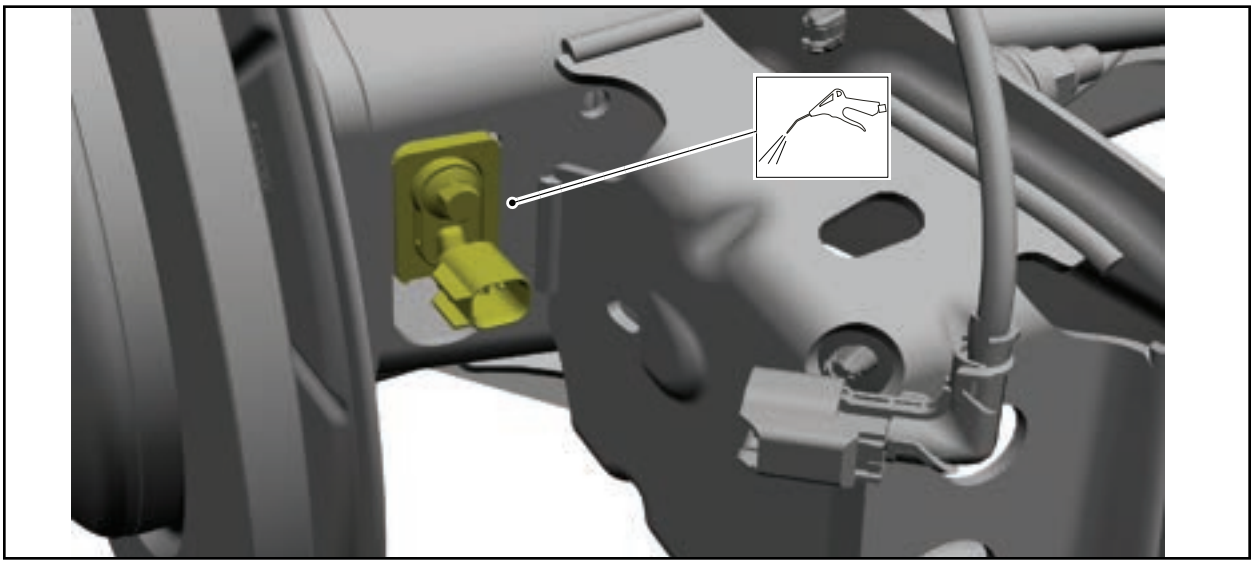


38. Disconnect the electrical connector.

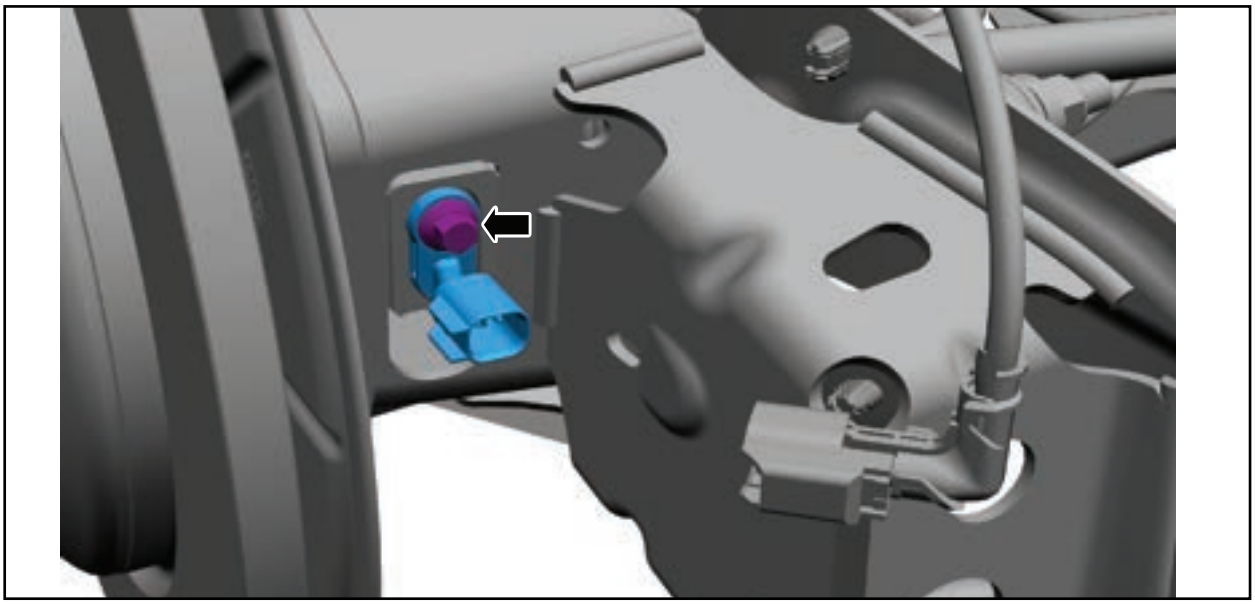


39. Using compressed air, clean the sensor housing area.

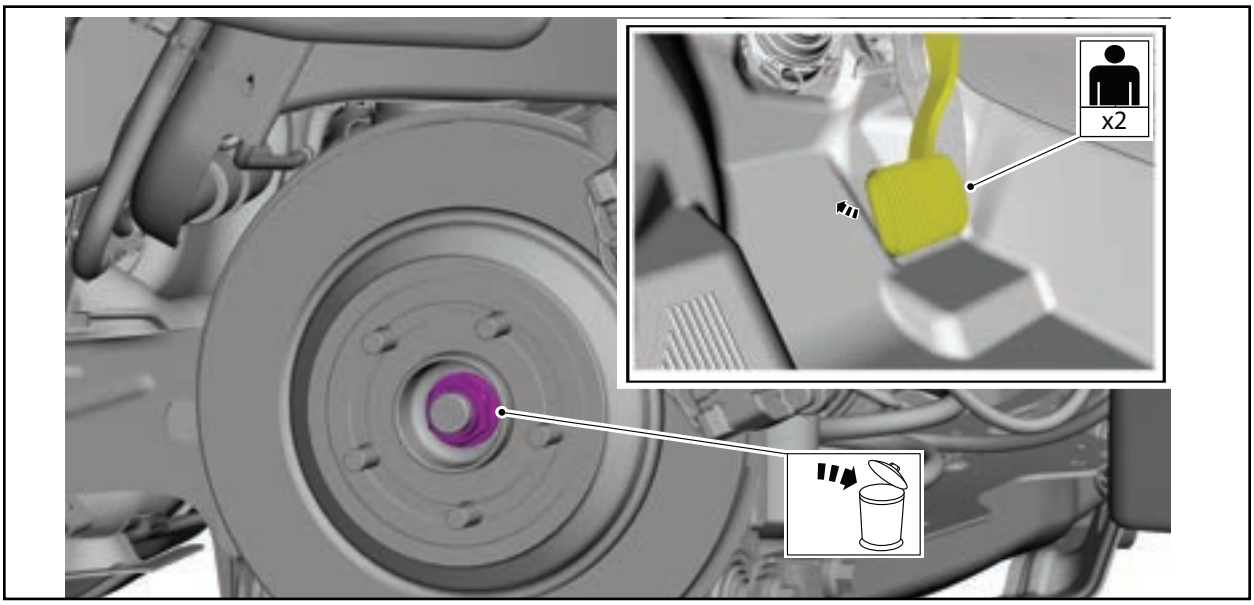
NOTE: Make sure that the sensor housing area is clean and free of foreign material before the sensor is removed.



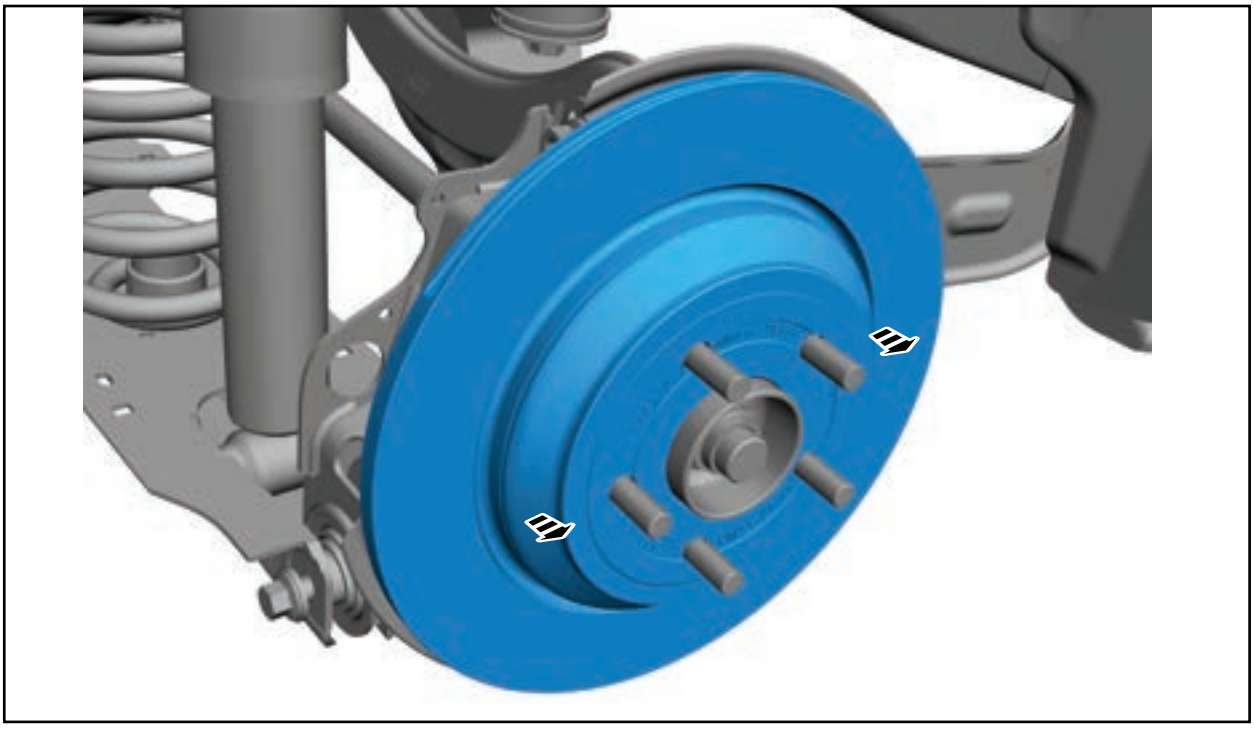
40. Remove the bolt and the rear wheel speed sensor.



41. Remove and discard the wheel hub nut.

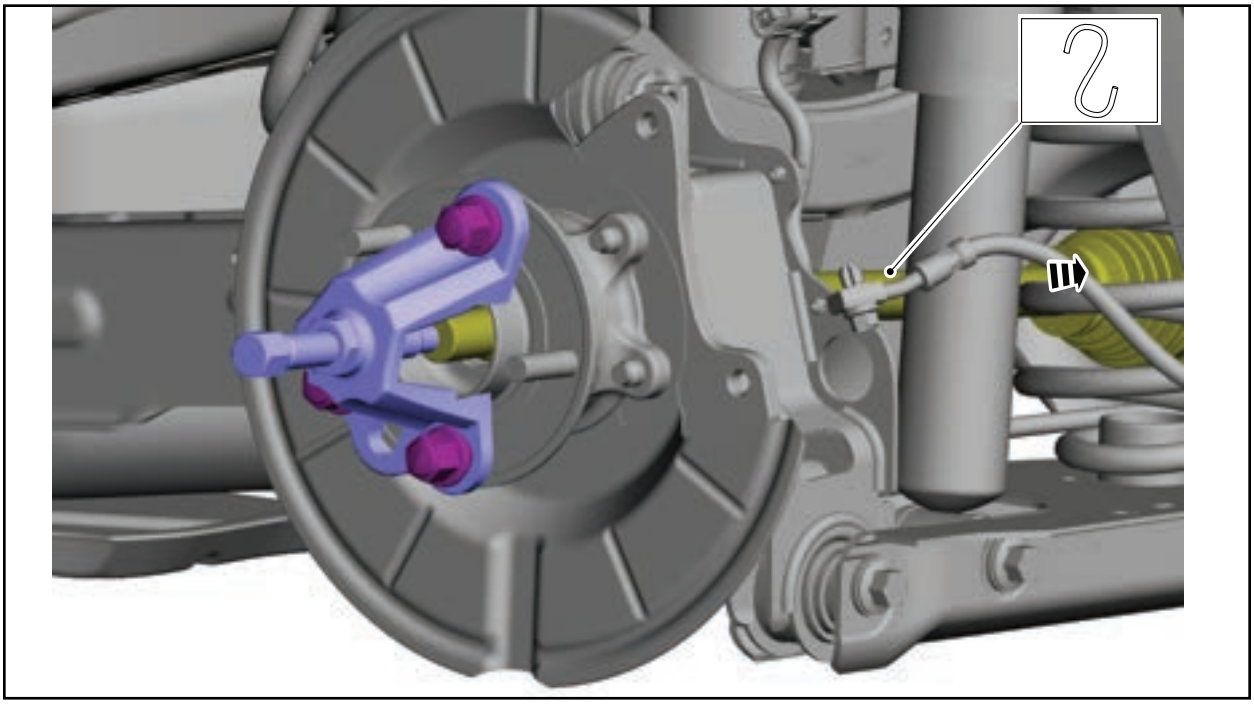


42. Remove the brake disc.

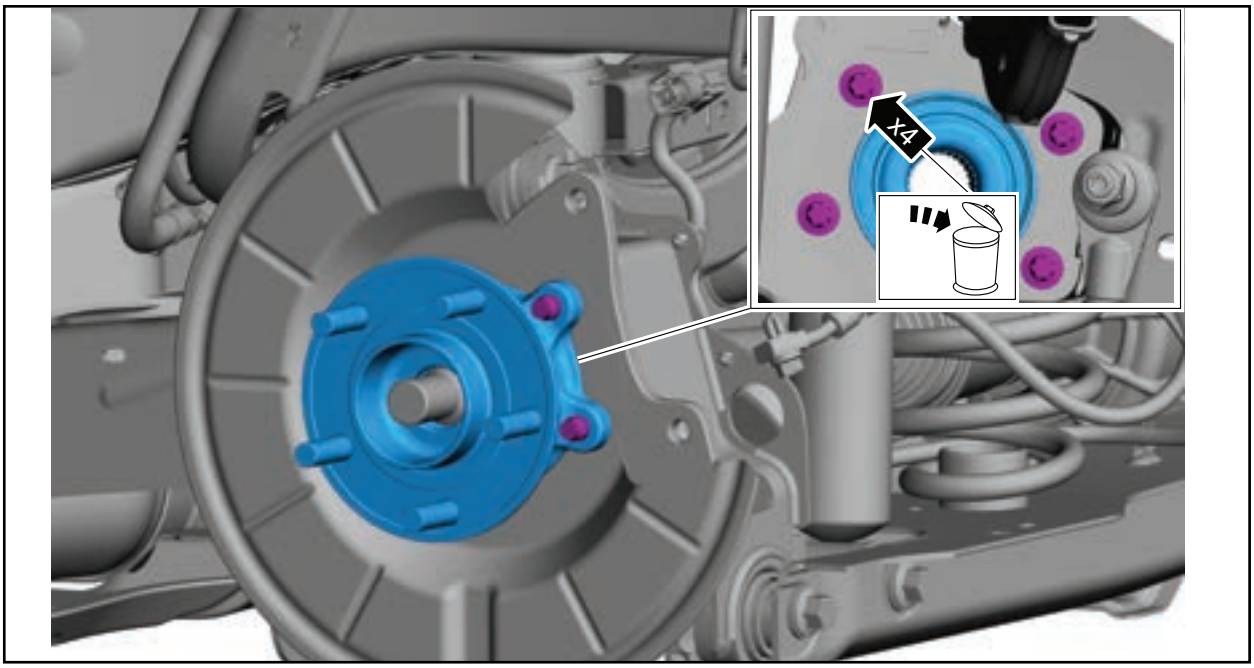


43. Install the special tool and press the halfshaft from the rear wheel bearing and wheel hub.
Use Special Service Tool: 205-D070 (D93P-1175-B) Remover, Front Wheel Hub.

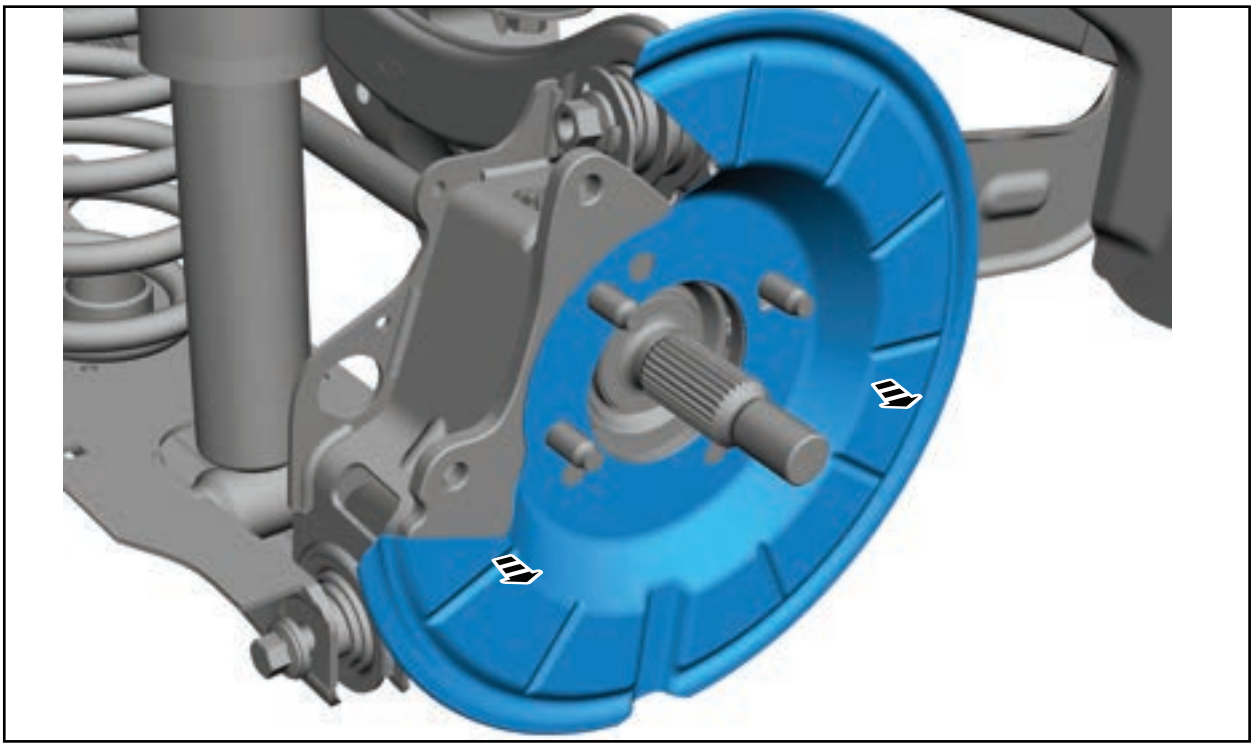
NOTE: Push the halfshaft into the wheel hub to gain access for the removal of the wheel bearing and wheel hub bolts.



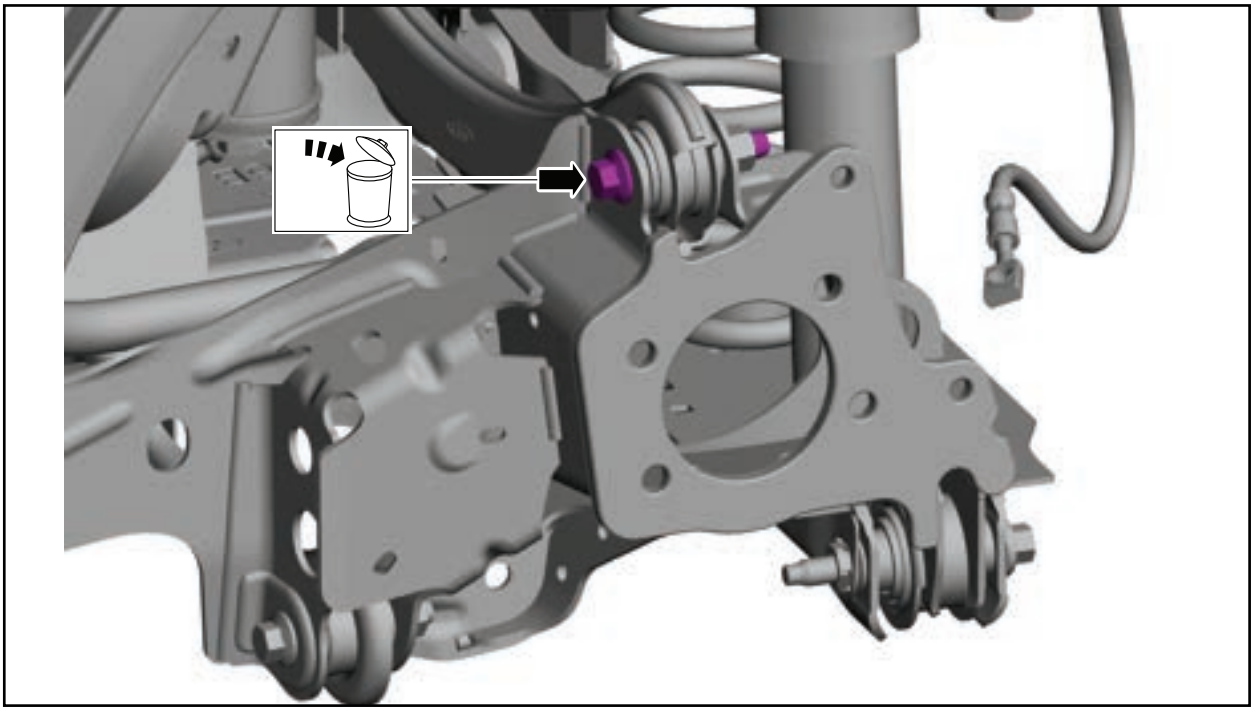
44. Remove and discard the wheel bearing and wheel hub bolts and remove the wheel bearing and wheel hub.



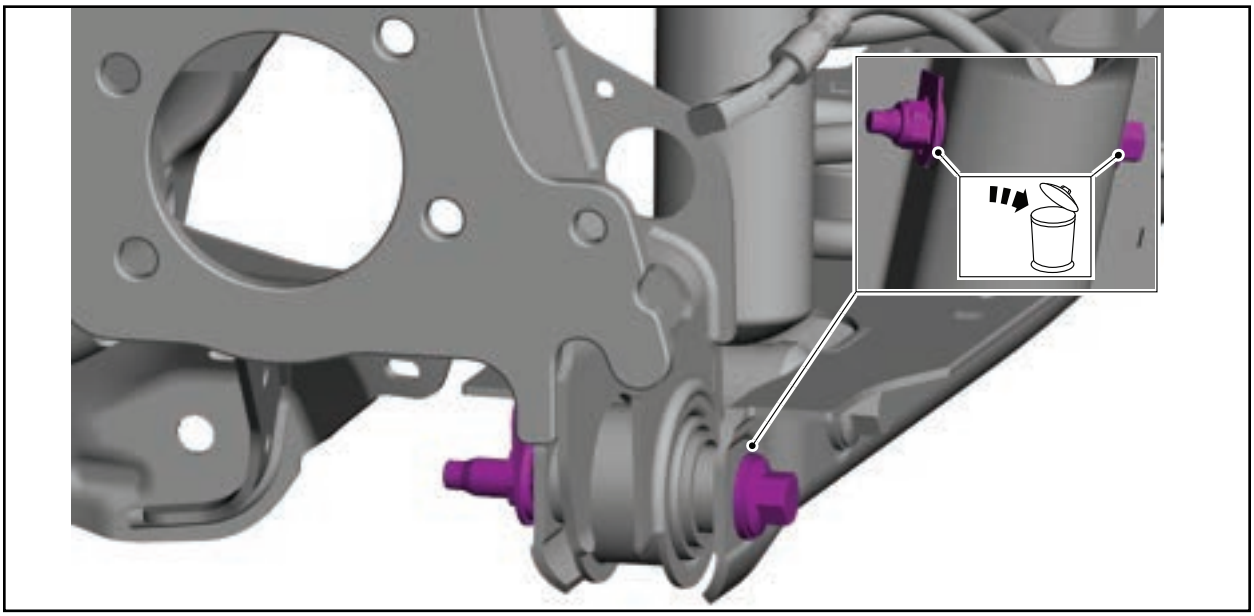
45. Remove the brake disc shield.



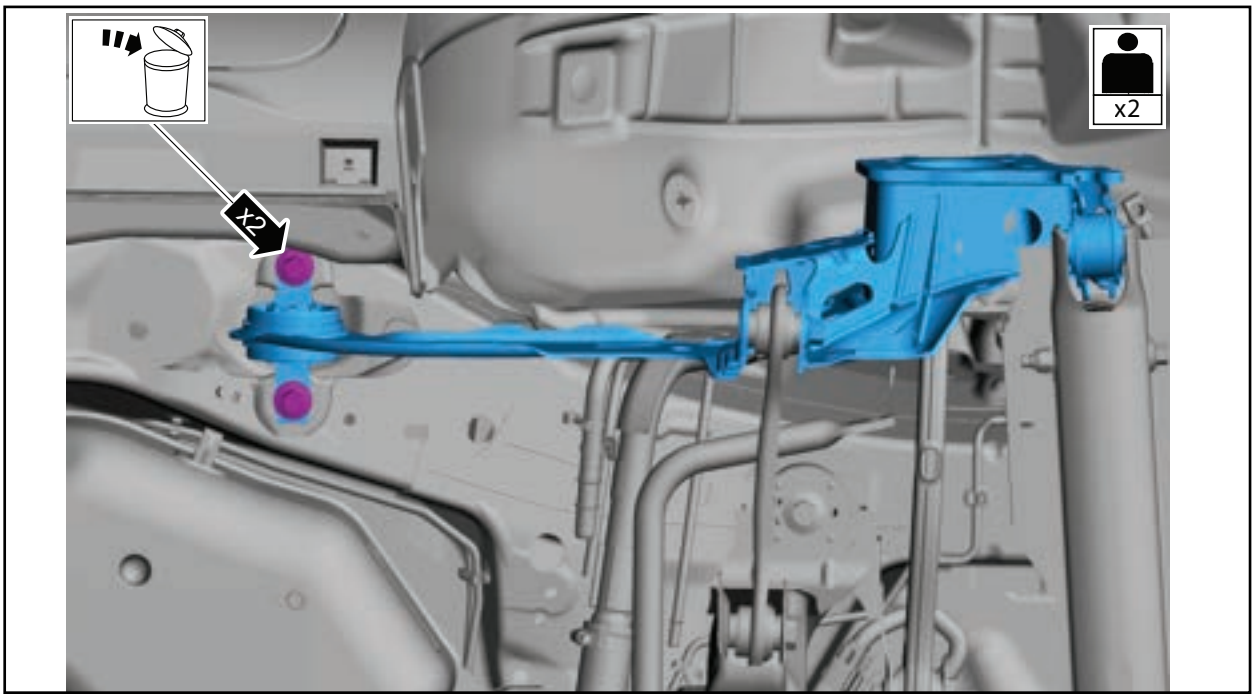
46. Remove and discard the upper arm-to-wheel knuckle bolt.



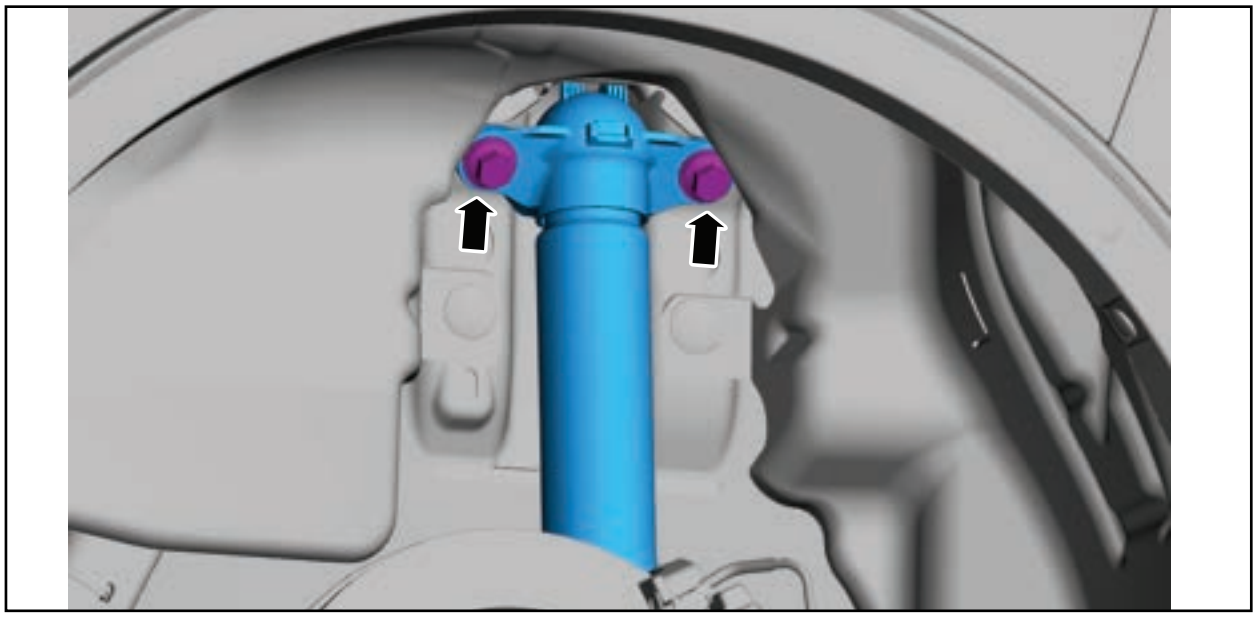
47. Remove and discard the rear lower arm-to-wheel knuckle bolt and nut.



48. Remove and discard the wheel knuckle forward bolts and remove the wheel knuckle.

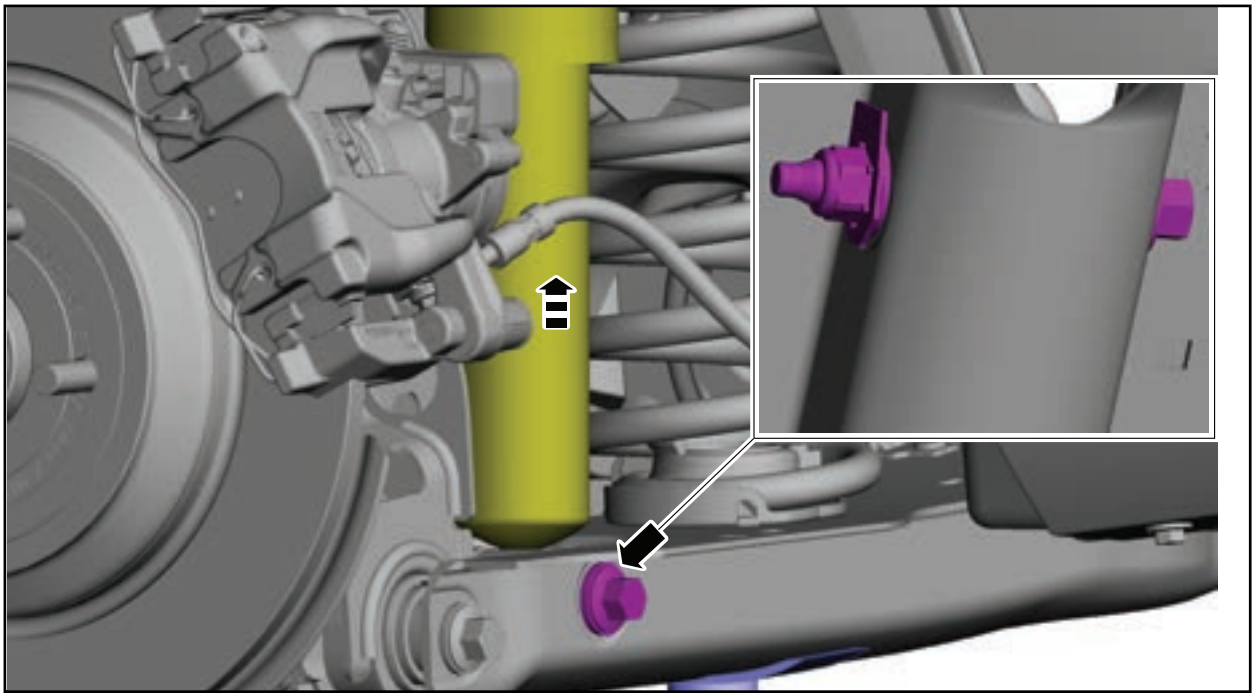


49. Install the *new* rear shock absorber and the rear shock absorber upper bolts.
    - Torque: 81 lb.ft (110 Nm)

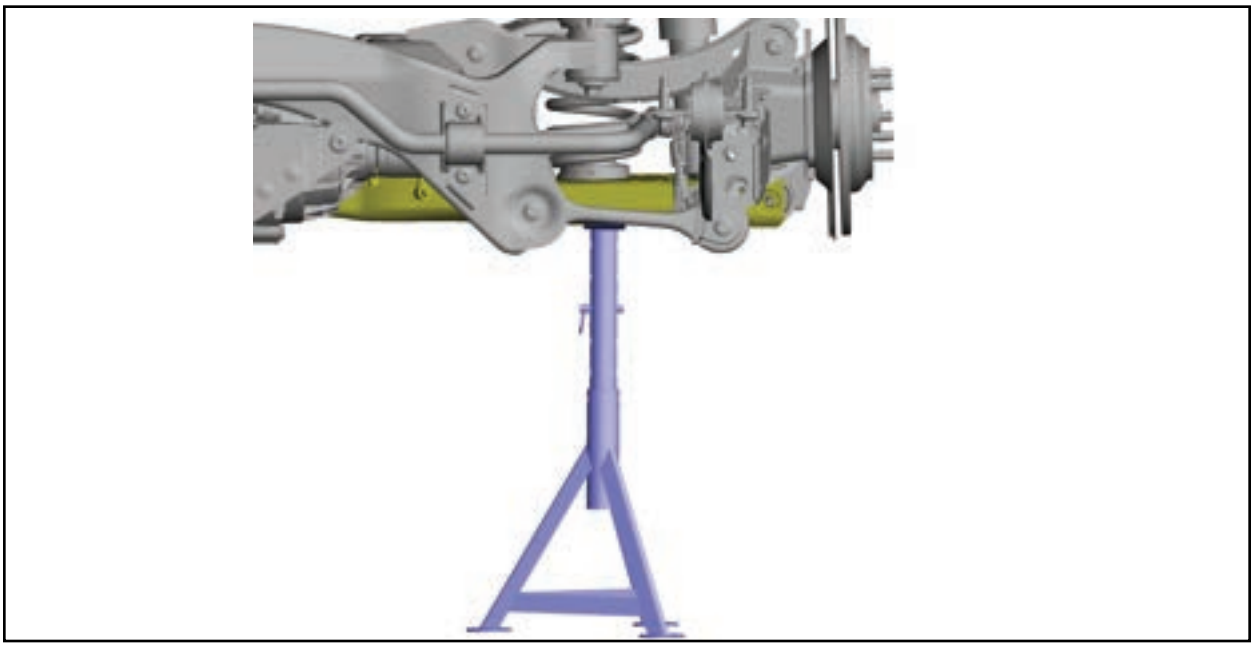


50. Install the *new* lower shock absorber bolt and nut.
    - Torque: 81 lb.ft (110 Nm)

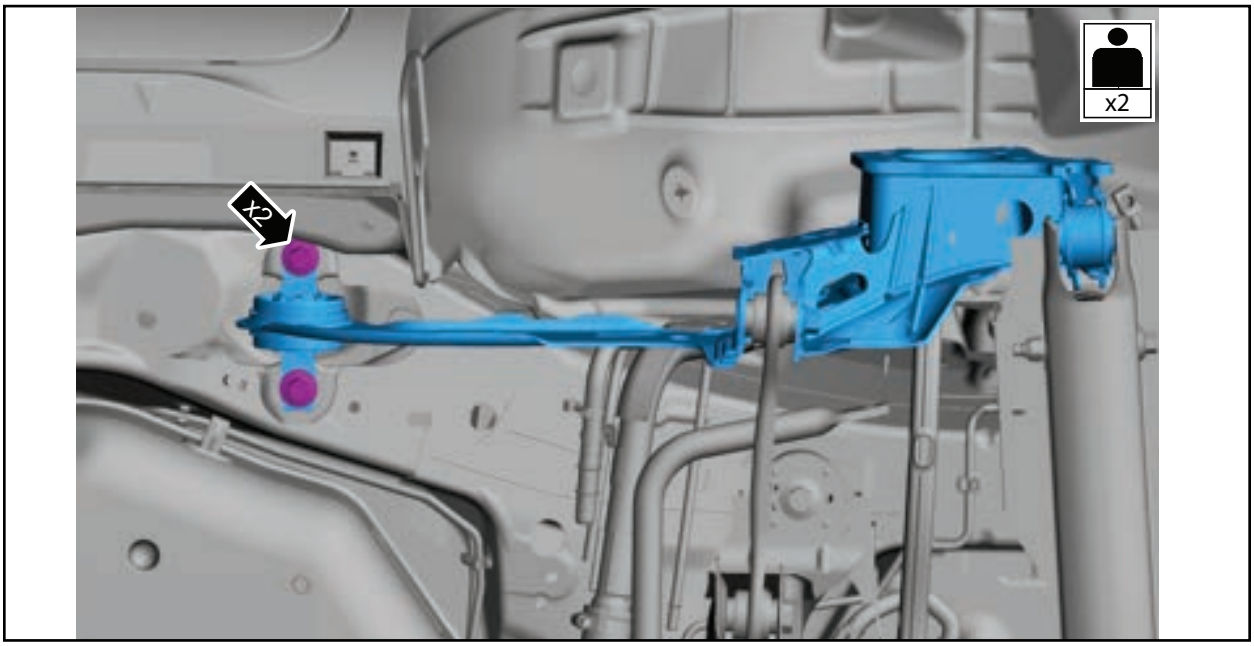
NOTICE: Tighten the suspension fasteners with the weight of the vehicle on the wheels and tires or use a suitable jack to raise the suspension to curb height or damage to the bushings may occur.



51. Remove the axle stand.
    Use the General Equipment: Vehicle/Axle Stands

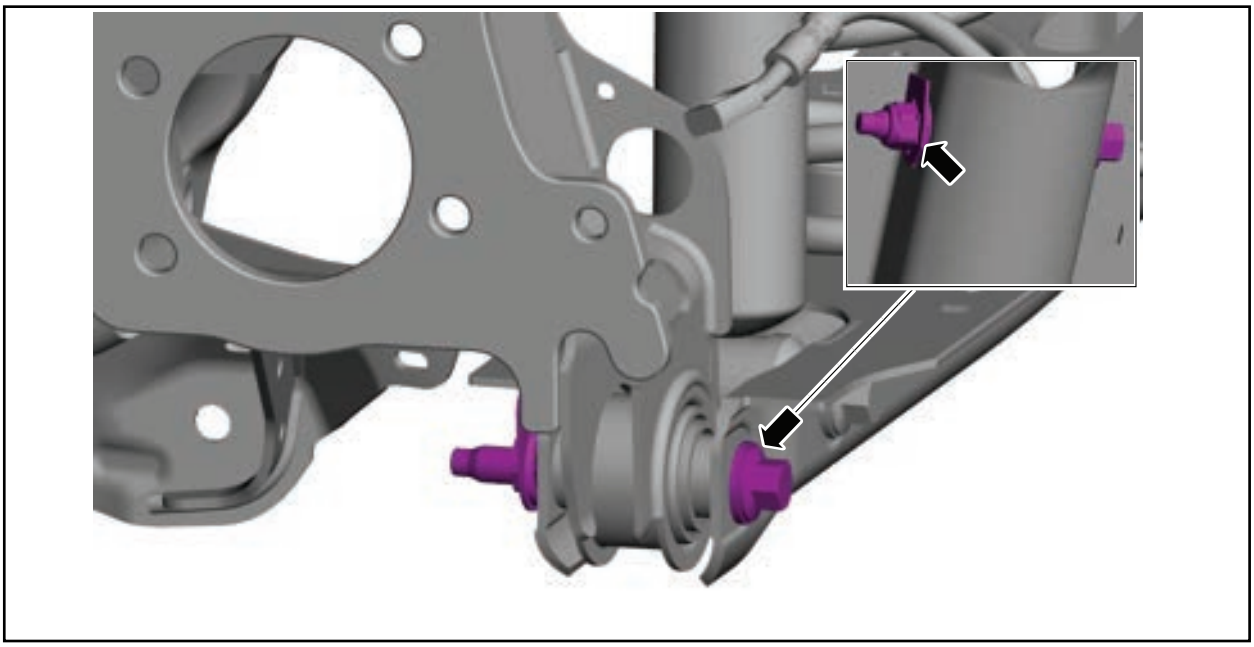


52. Install the wheel knuckle and tighten the new wheel knuckle forward bolts.
    • Torque: 129 lb.ft (175 Nm)



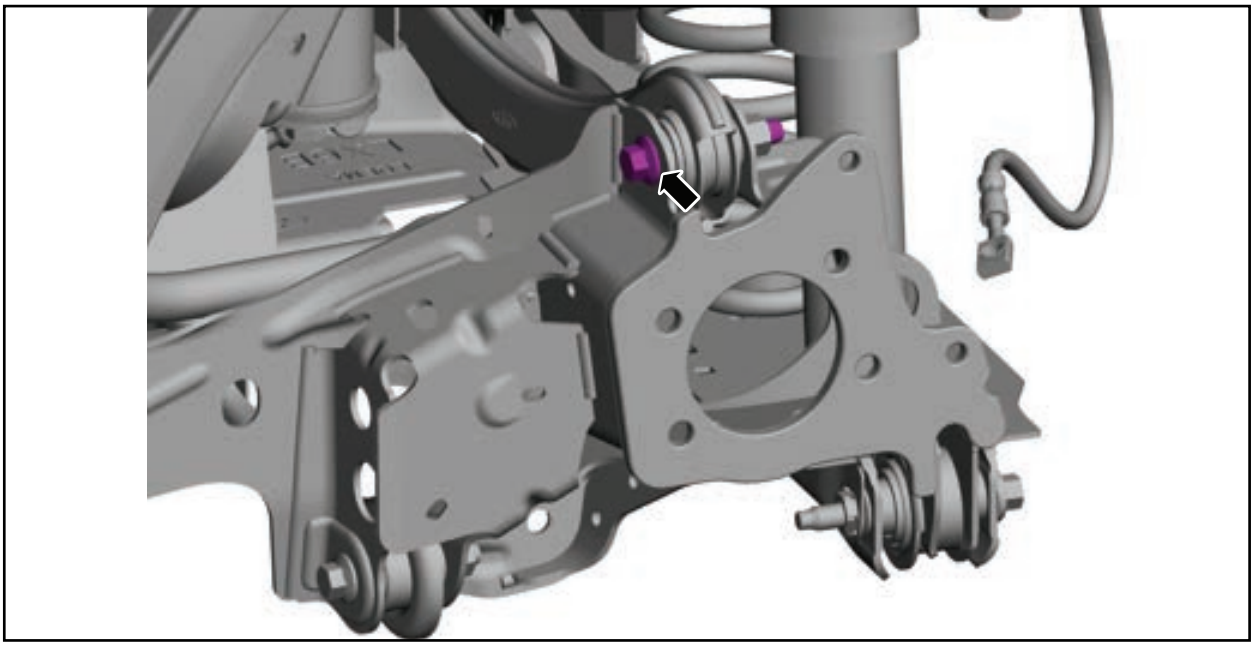
53. Install the *new* rear lower arm-to-wheel knuckle bolt and nut.

NOTE: Only tighten the bolt and nut finger tight at this stage.



54. Install the *new* upper arm-to-wheel knuckle bolt.

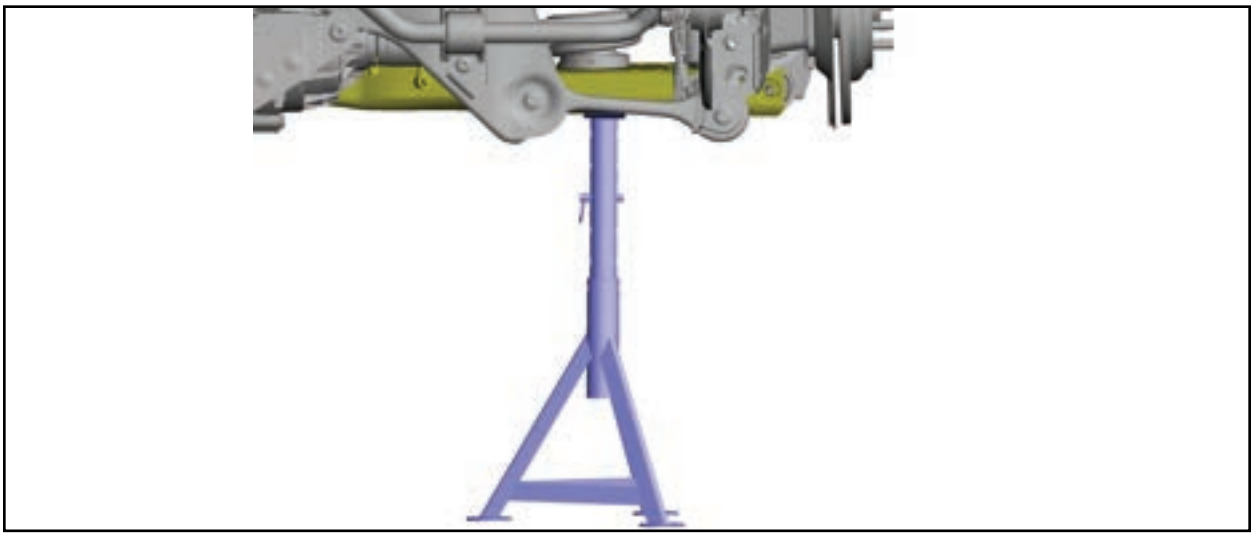
NOTE: Only tighten the bolt and nut finger tight at this stage.



55. Raise the suspension to curb height.
    Use the General Equipment: Vehicle/Axle Stands

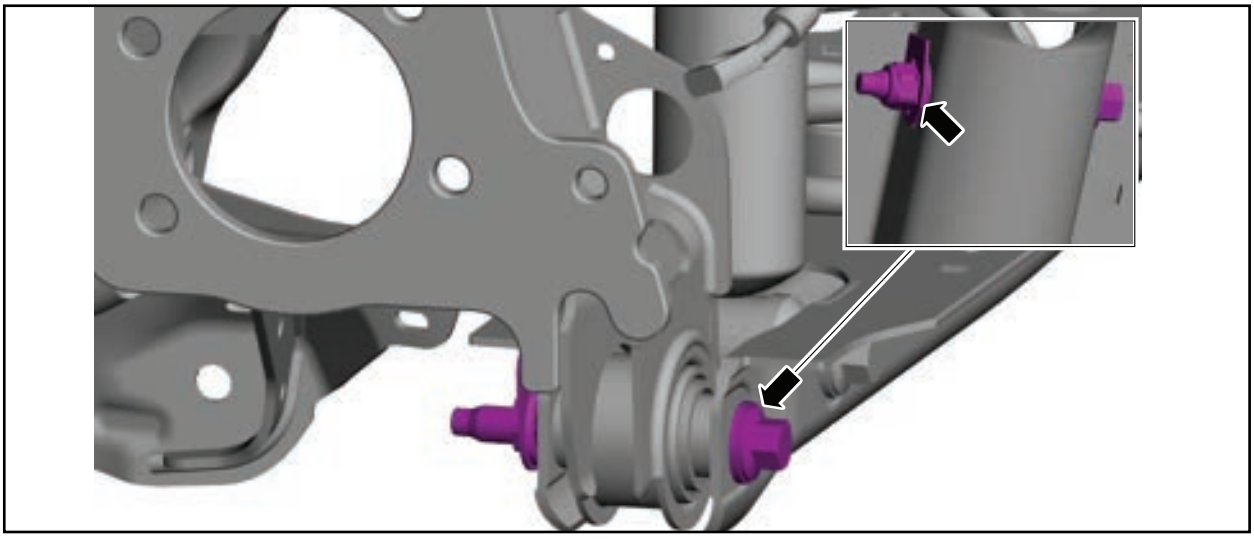
NOTICE: Do not attempt to jacking on the front control arm or rear control arm on any vehicle. Damage to control arms may occur.

NOTICE: Make sure that the insulator pads are correctly positioned to prevent direct contact with other components.



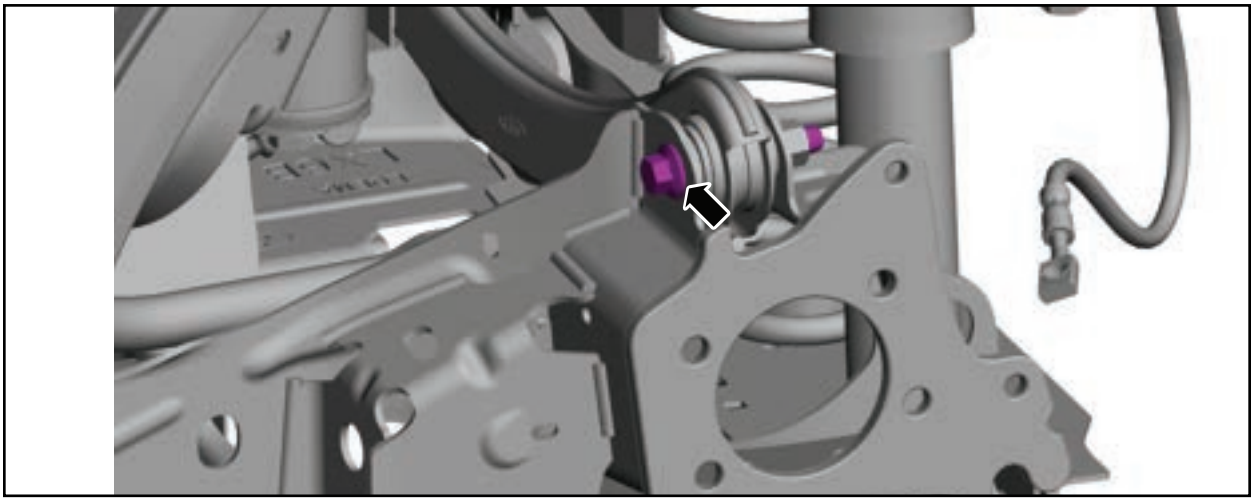
56. Tighten the new rear lower arm-to-wheel knuckle bolt and nut.
    - Torque Stage 1: 81 lb.ft (110 Nm)
      Stage 2: 120°

NOTICE: Tighten the suspension fasteners with the weight of the vehicle on the wheels and tires or use a suitable jack to raise the suspension to curb height or damage to the bushings may occur.

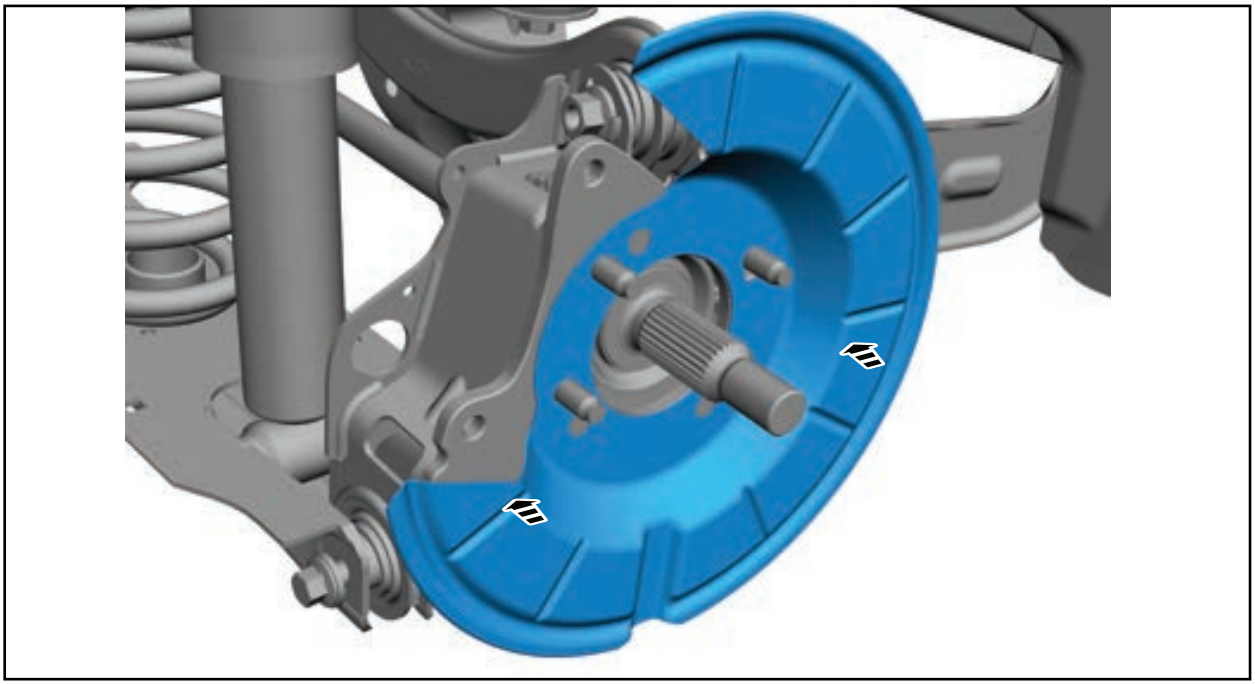


57. Tighten the new upper arm-to-wheel knuckle bolt.
    - Torque Stage 1: 59 lb.ft (80 Nm)
      Stage 2: 120°

NOTICE: Tighten the suspension fasteners with the weight of the vehicle on the wheels and tires or use a suitable jack to raise the suspension to curb height or damage to the bushings may occur.

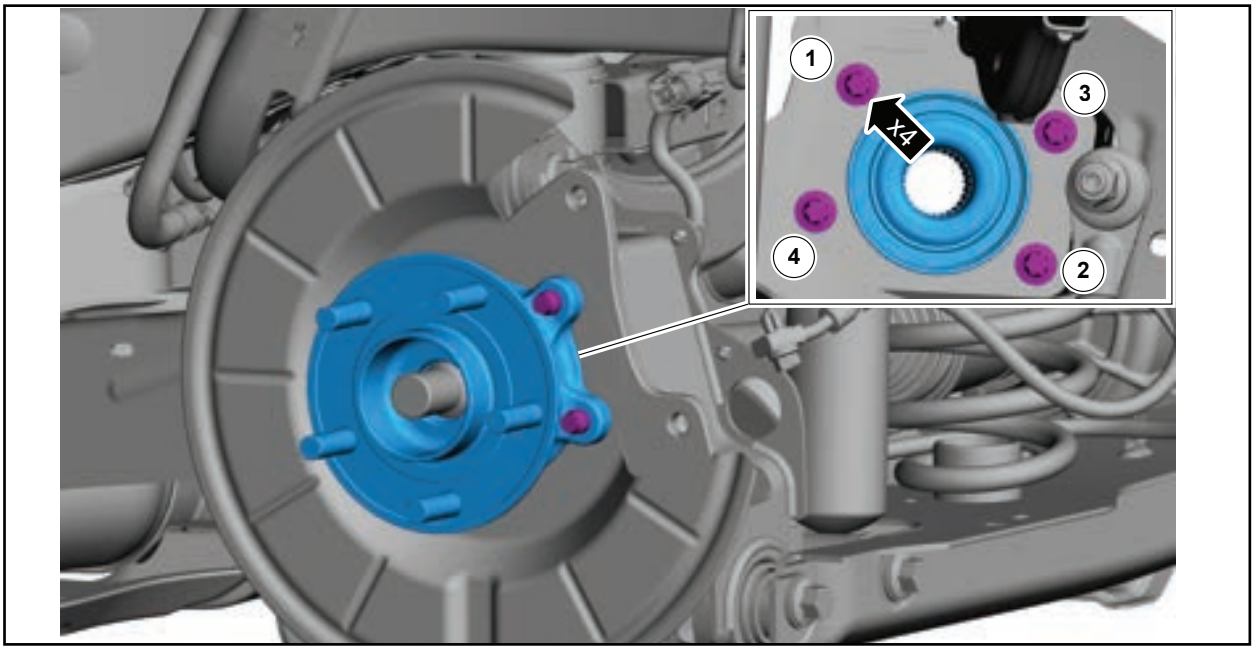


58. Install the brake disc shield.

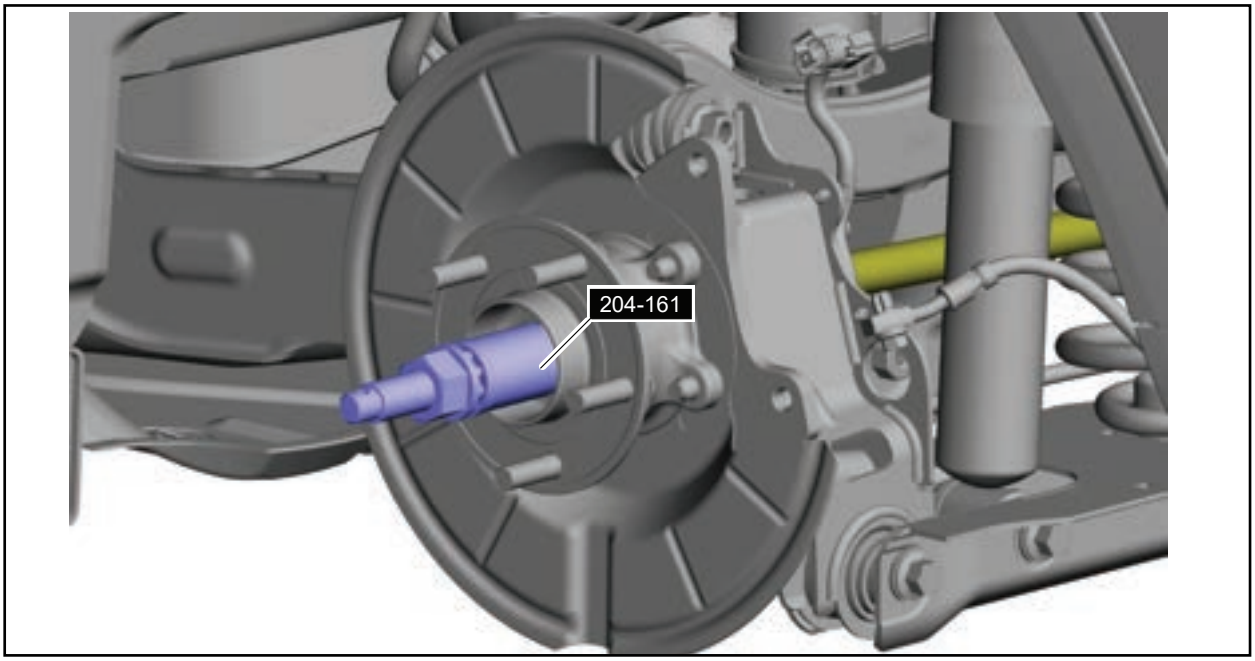


59. Install the wheel bearing and wheel hub and install the new wheel bearing and wheel hub retainers.
    - Torque: 81 lb.ft (110 Nm)

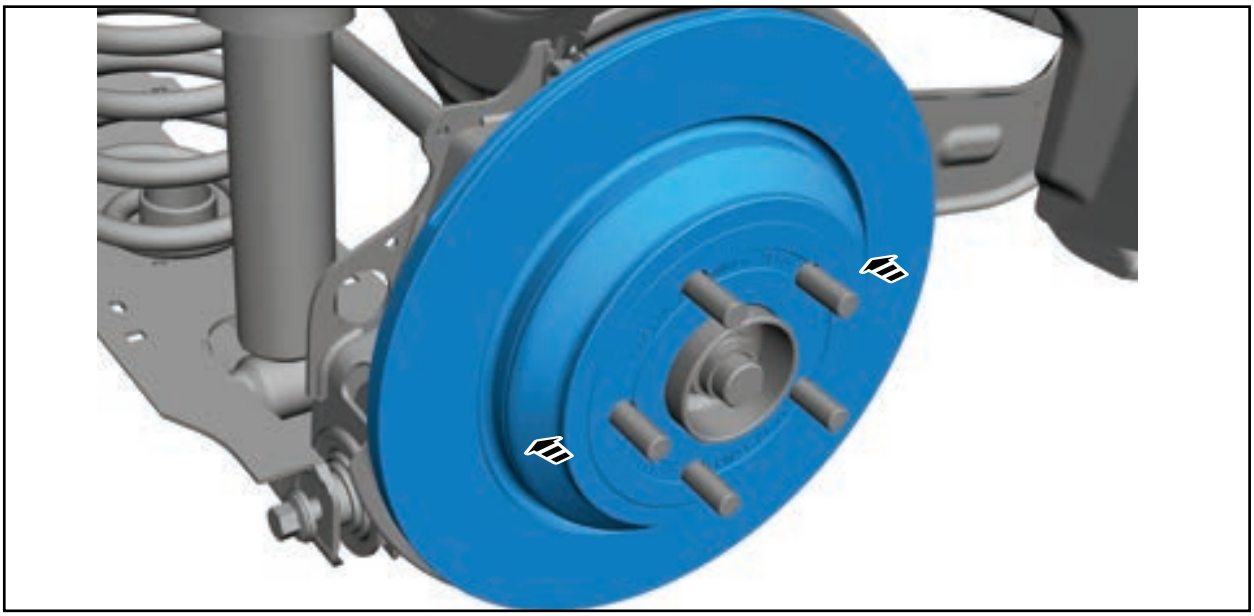
NOTE: Tighten the bolts in a cross pattern.



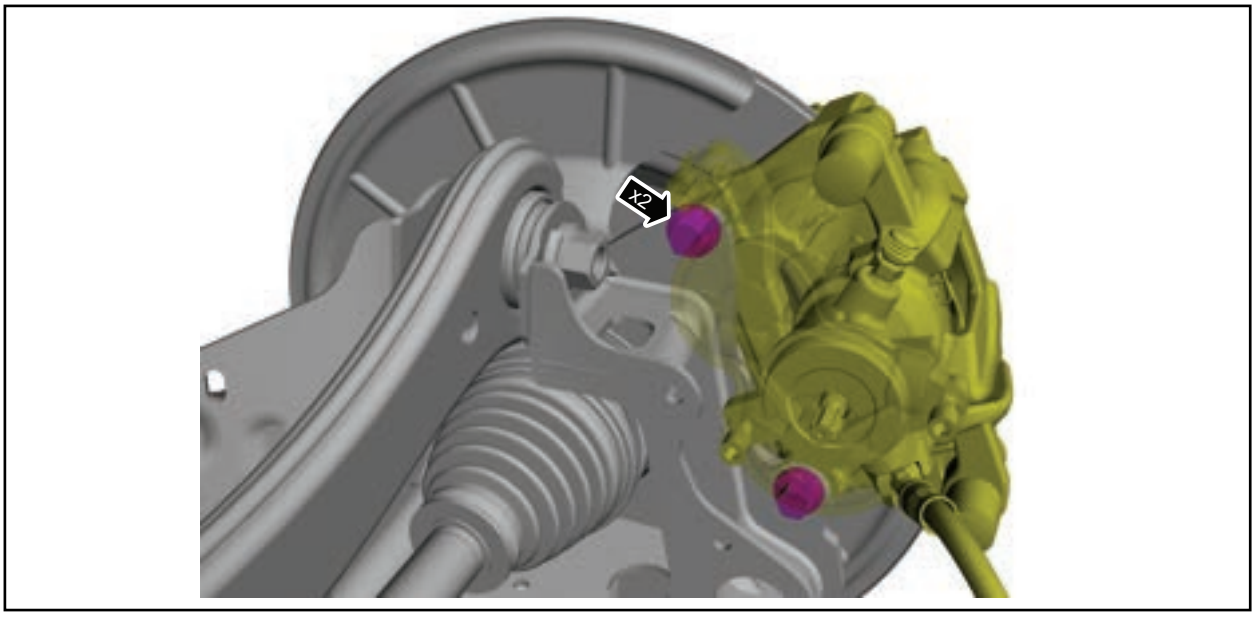
60. Pull the halfshaft into the hub.
    Use Special Service Tool: 204-161 (T97P-1175-A) Installer, Halfshaft.



61. Install the brake disc.

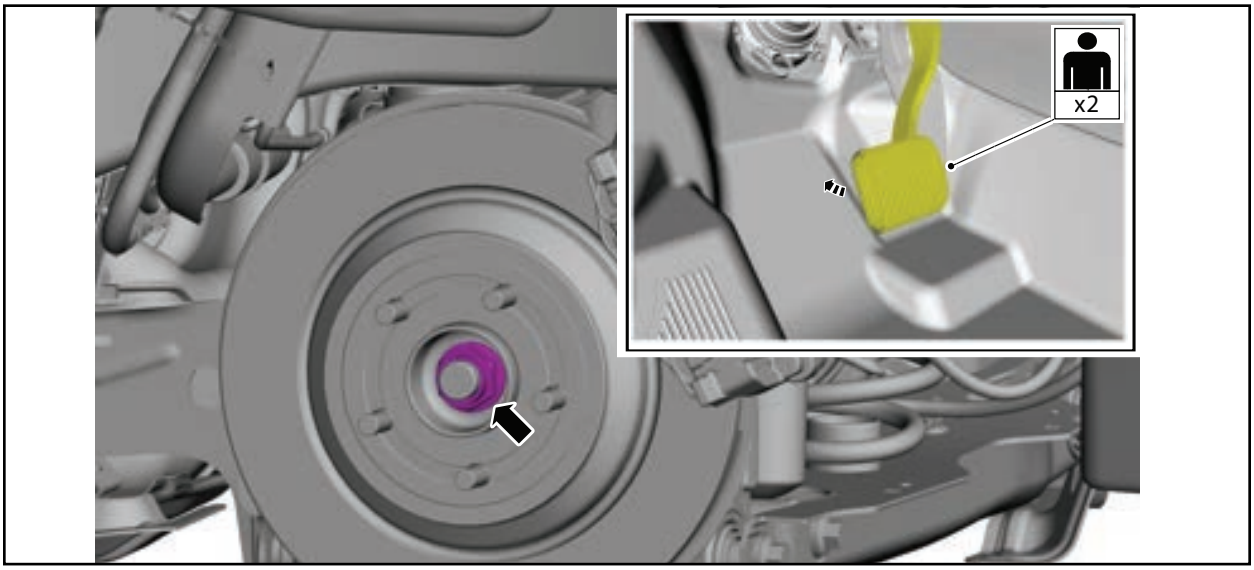


62. Position the brake caliper and anchor plate assembly and install the *new* bolts.
    - Torque: 46 lb.ft (63 Nm)



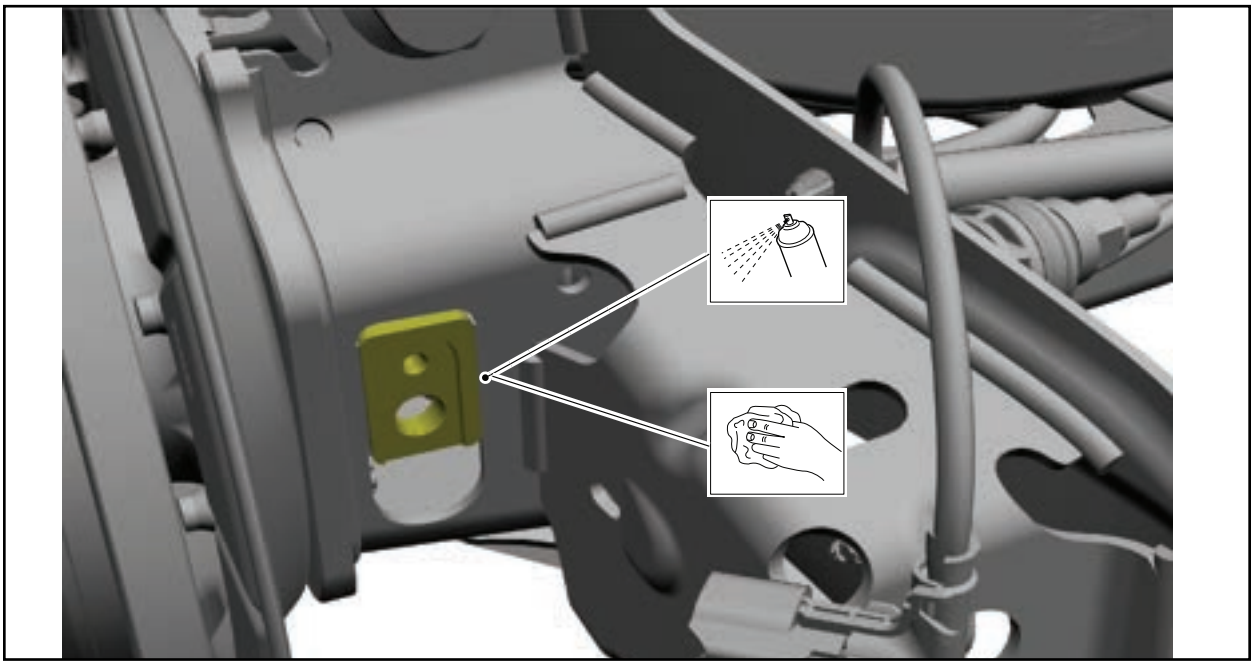
63. Install the new wheel hub nut.
    - Torque: 98 lb.ft (133 Nm)

NOTE: Apply the brake to keep the halfshaft from rotating.

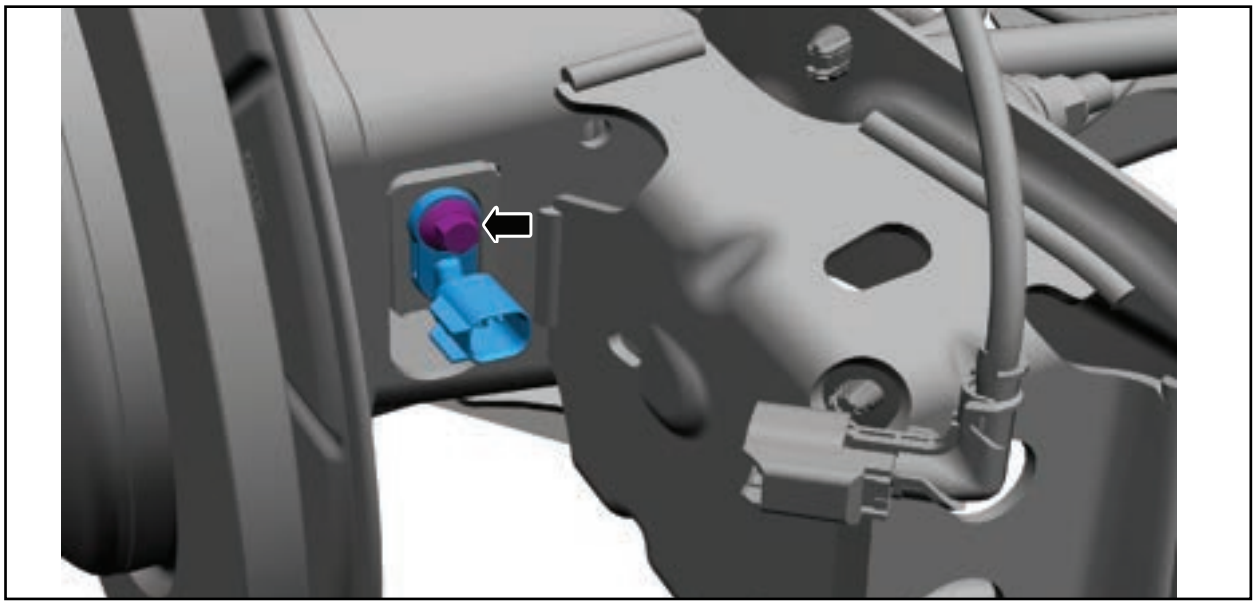


64. Clean and inspect the sensor housing cavity.
    Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B

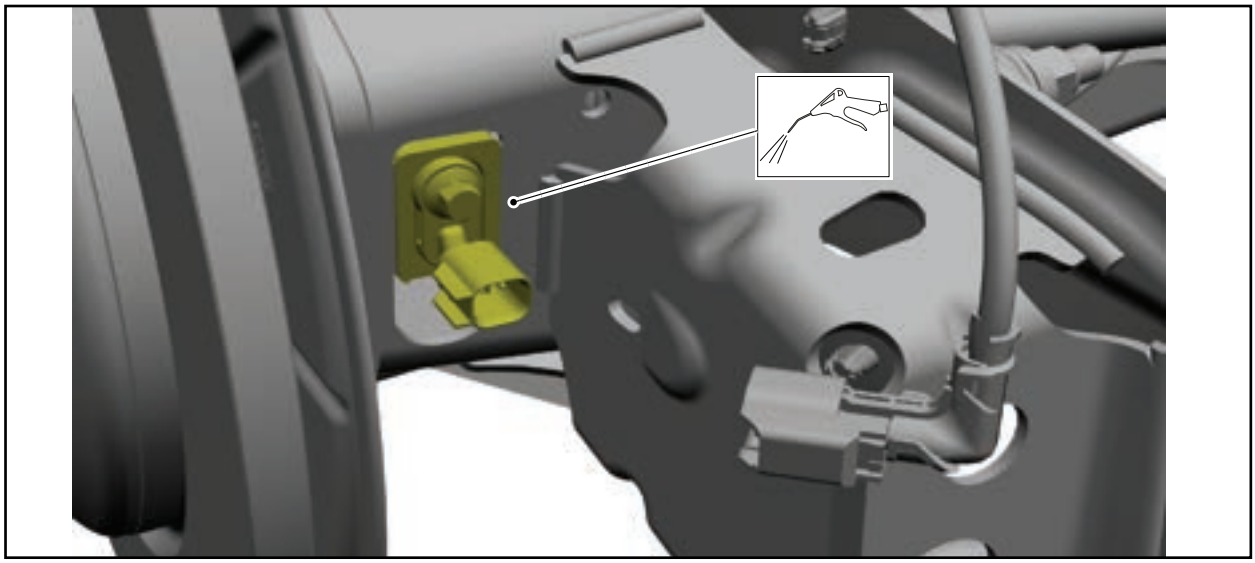
NOTICE: Before installing a new sensor, inspect the sensor housing to make sure the sensor cavity is clean and free of foreign material or damage to the sensor may occur.



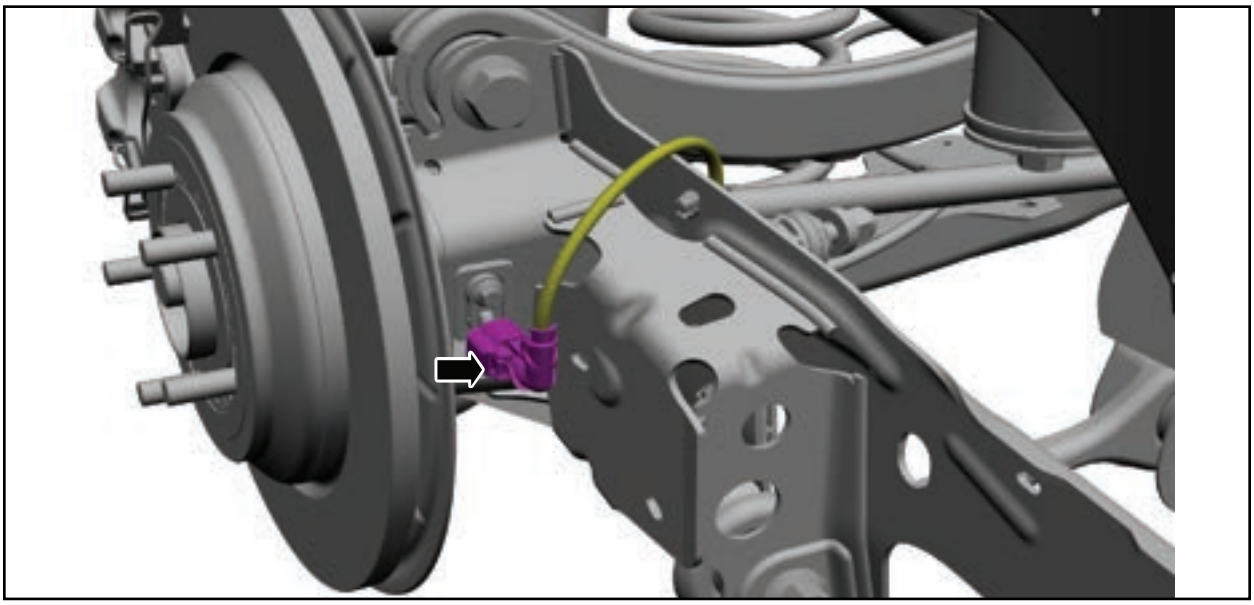
65. Install the rear wheel speed sensor and bolt.
    - Torque: 71 lb.in (8 Nm)



66. Using compressed air, clean the sensor housing area.

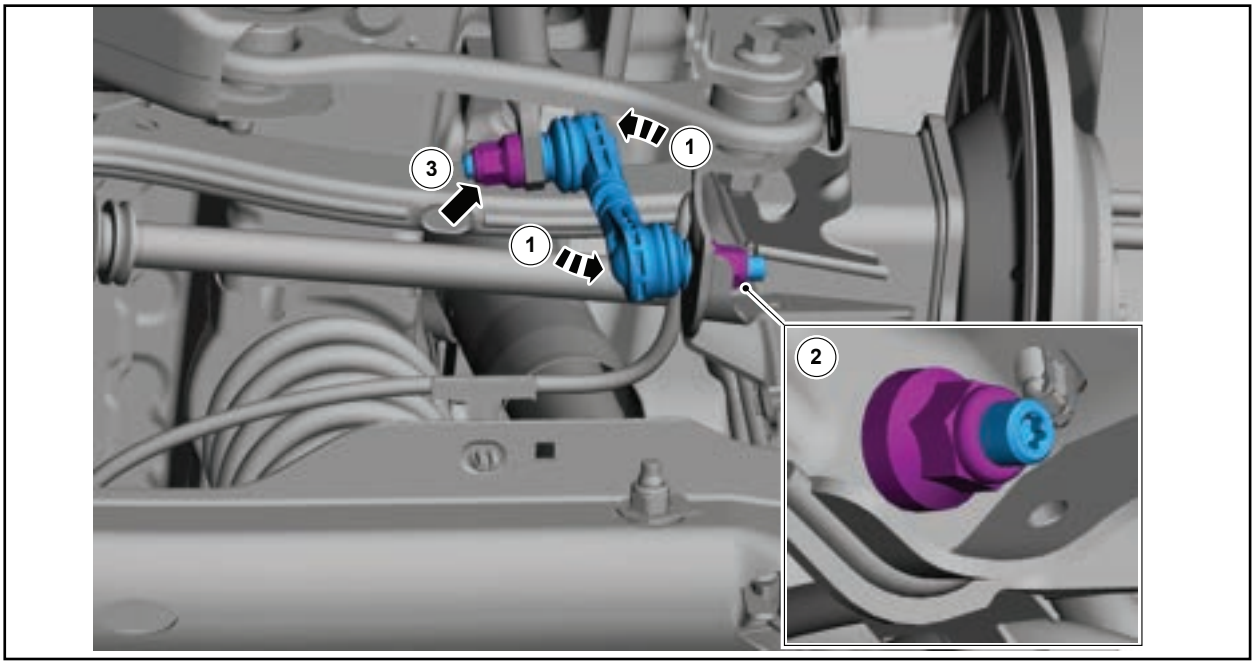


67. Connect the electrical connector.

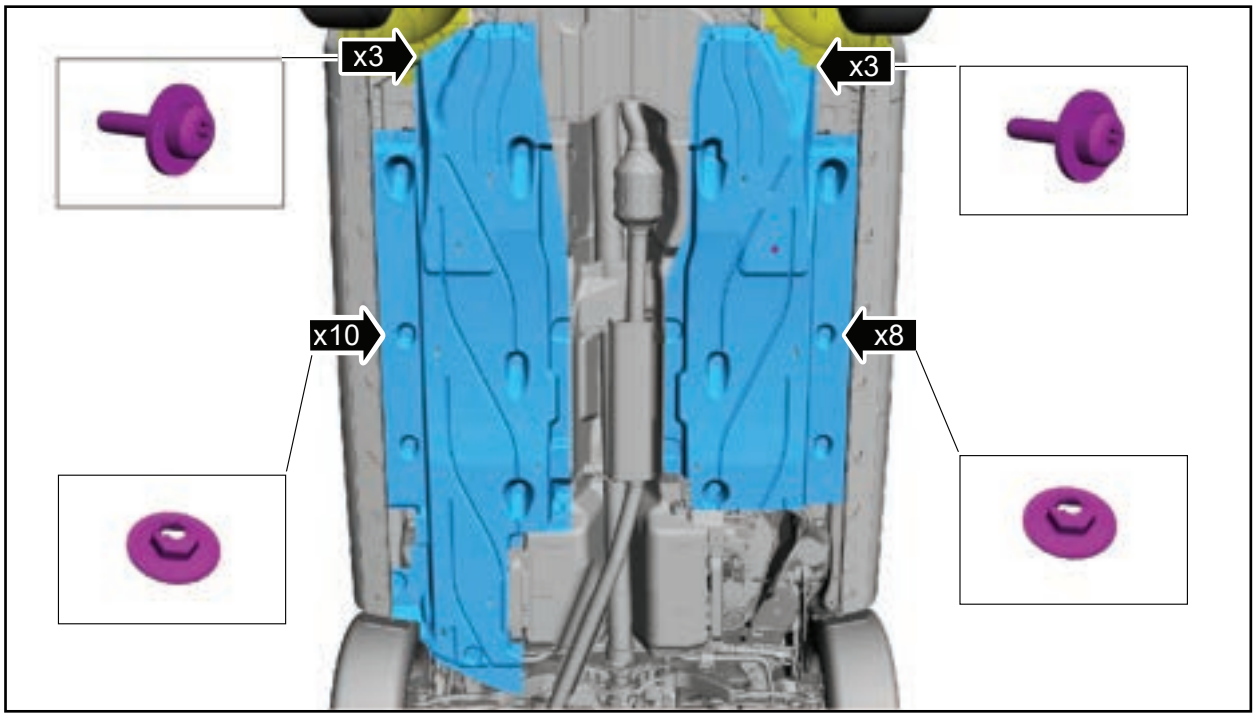


68. Install the rear stabilizer link, then install the new rear stabilizer bar link upper and lower nuts.
    - Torque: 85 lb.ft (115 Nm)

NOTE: Use the TORX PLUS® holding feature to prevent the ball stud from turning while removing or installing the lower arm outboard nut. Torx® and TORX PLUS® is a reg. tm of Acument Intellectual Properties, LLC.



69. Install the underbody shields and the retainers.
    - Torque: 22 lb.in (2.5 Nm)

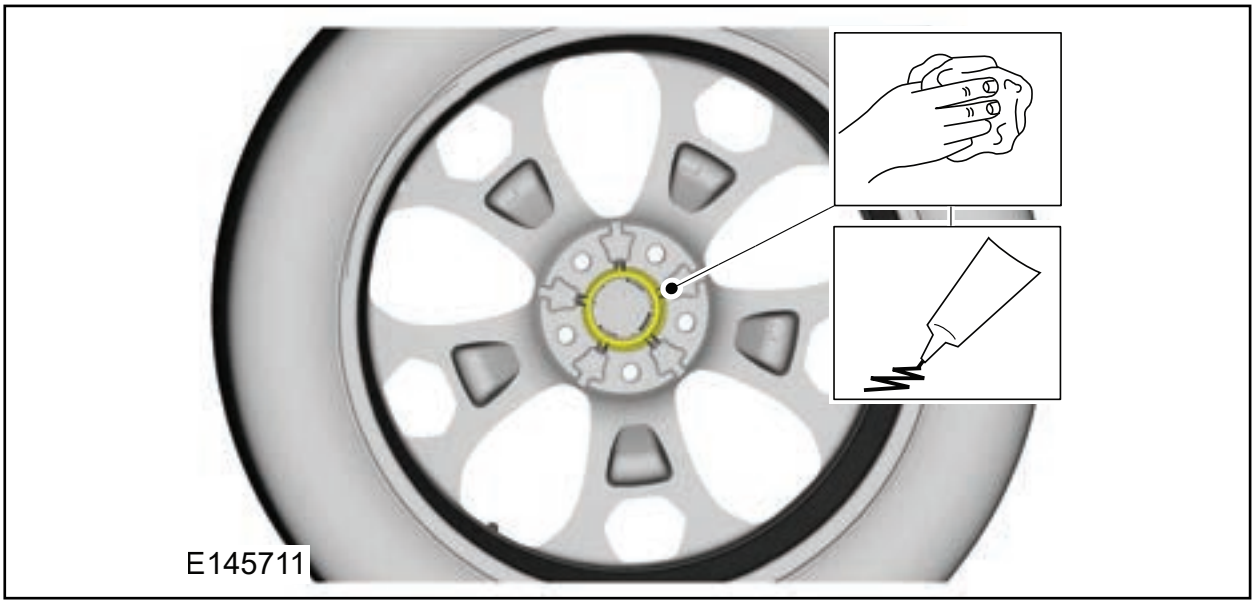


70. Install the wheels and tires.

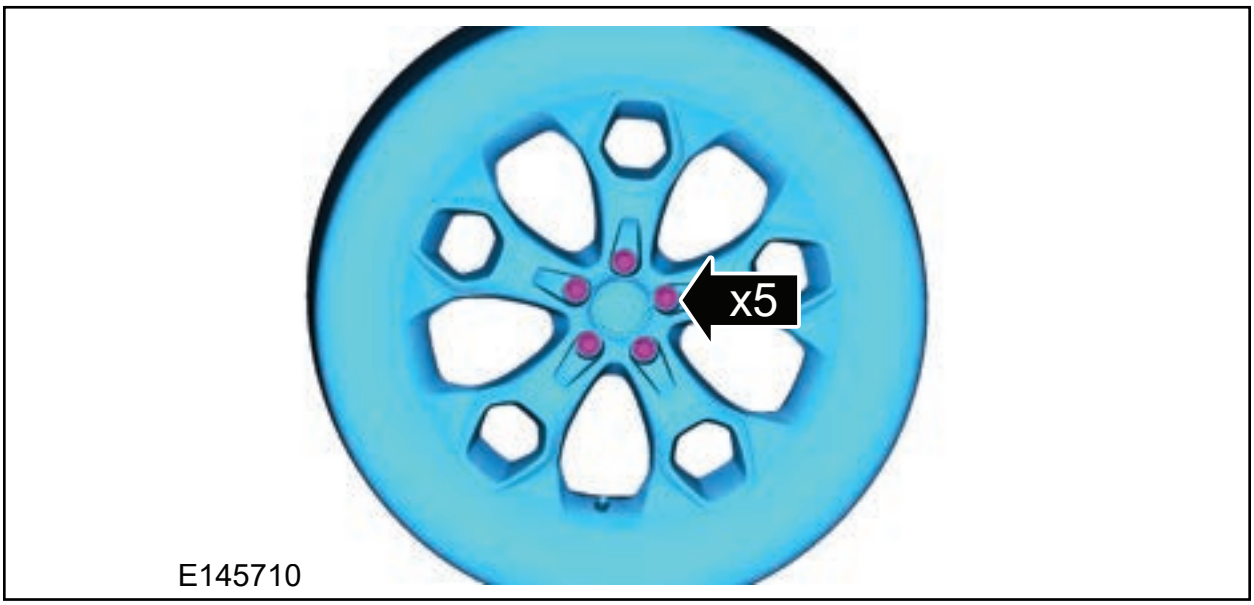
WARNING: When a wheel is installed, always remove any corrosion, dirt or foreign material present on the mounting surface of the wheel and the mounting surface of the wheel hub, brake drum or brake disc. Make sure that any fasteners that attach the rotor to the hub are secured so they do not interfere with the mounting surfaces of the wheel. Failure to follow these instructions when installing wheels may result in the wheel nuts loosening and the wheel coming off while the vehicle is in motion, which could result in loss of control, leading to serious injury or death to vehicle occupant(s).

NOTICE: Make sure to apply a thin coat of anti-seize lubrication only to the interface between the wheel pilot bore and the hub pilot. Do not allow the anti-seize to make contact with the wheel-to-brake disc/drum mounting surface, wheel studs, wheel nuts, brake pads or brake disc friction surfaces or damage to components may occur.

a. Apply a thin coat of anti-seize lubrication to the interface between the wheel pilot bore and the hub pilot.
   Material: Motorcraft® High Temperature Nickel Anti-Seize Lubricant / XL-2


E145711

b. Install the wheel and the wheel nuts finger tight only at this stage.



E145710

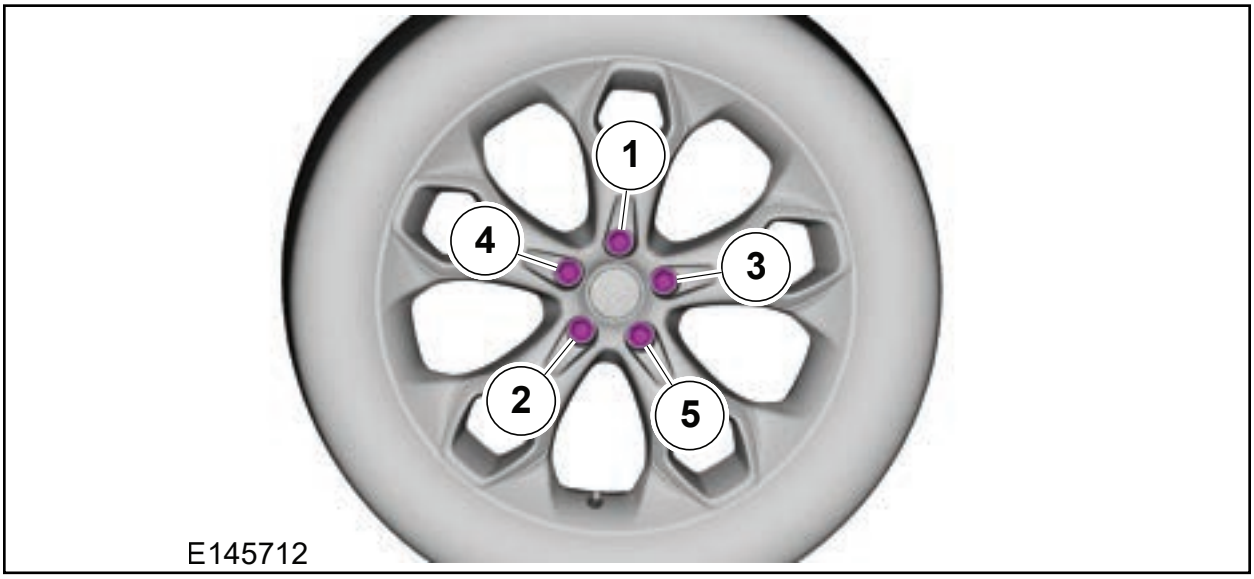
c. Tighten the wheel nuts in the sequence shown.
- Torque: 100 lb.ft (135 Nm)

WARNING: Retighten wheel nuts within 160 km (100 mi) after a wheel is reinstalled. Wheels can loosen after initial tightening. Failure to follow this instruction may result in serious injury to vehicle occupant(s).

NOTICE: Failure to tighten the wheel nuts in a star/cross pattern can result in high brake disc runout, which accelerates the development of brake roughness, shudder and vibration.

NOTE: The wheel nut torque specification is for clean, dry wheel stud and wheel nut threads.

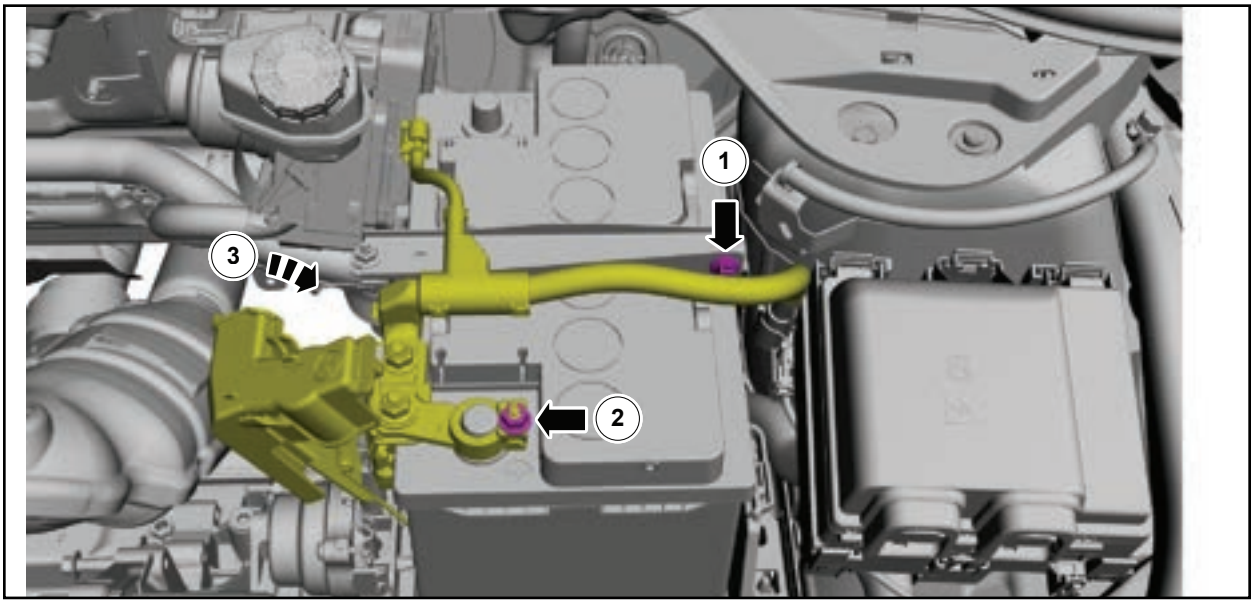
NOTE: Final tightening to be performed with vehicle resting on tires.



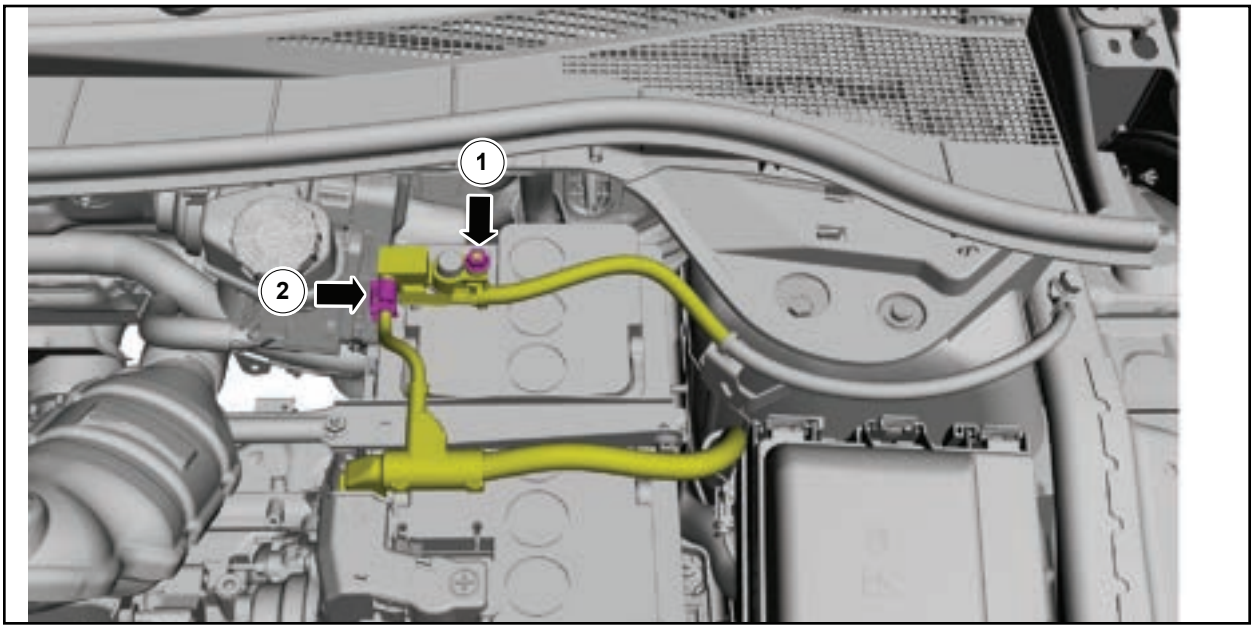
E145712

71. Connect the battery.

a. Re position the positive battery cable and attach the battery cable retainer from the battery hold-down bracket. Torque the positive battery cable terminal nut and reposition the positive battery cable battery terminal cover.
• Torque: 48 lb.in (5.4 Nm)



b. Reposition the negative battery cable and tighten the nut, then connect the battery monitoring sensor electrical connector.



72. For vehicles with window one-touch open and close front windows, perform the power door window initialization.

WARNING: Keep objects and body parts clear of the glass panel when carrying out the initialization procedure. During the initialization procedure, the glass panel closes with high force and cannot detect objects in its path. Failure to follow this instruction may result in serious personal injury.

NOTE: Make sure that the window runs are correctly installed and free of foreign material.

a. Start the engine.

b. Press and hold the window control switch until the door window is fully open.

c. Release the window control switch.

NOTE: All of the remaining steps must be carried out within 30 seconds from start to finish.

d. Lift and hold the window control switch until the door window stalls in the fully closed position for 2 seconds.

e. Release the window control switch.

f. Press and hold the window control switch until the door window stalls in the fully open position for 2 seconds.

g. Release the window control switch.

h. Lift and hold the window control switch until the door window stalls in the fully closed position for 2 seconds.

i. Test for correct window operation by carrying out the one-touch down and one-touch up features.

73. Check and if necessary adjust rear toe.

NOTICE: Do not use any tools or equipment to move the wheel and tire assembly or suspension components while checking for relative movement. Suspension damage may occur. The use of tools or equipment will also create relative movement that may not exist when using hand force. Relative movement must be measured using hand force only.

NOTE: Make sure that the vehicle is standing on a level surface.

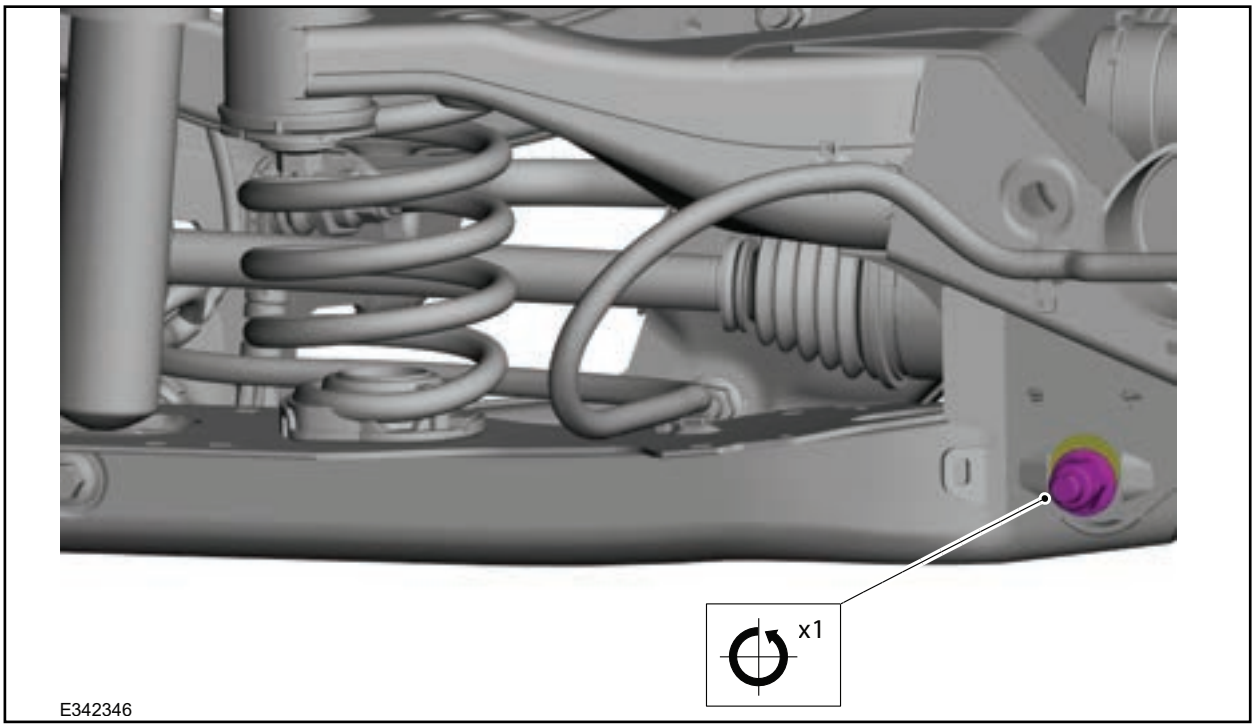
NOTE: Before carrying out a toe adjustment, check the tires for the correct pressure. Inspect the tires for incorrect wear or damage. Inspect the suspension for wear or damage.

a. Using alignment equipment and the manufacturer's instructions, check the rear toe setting on both sides. Use the General Equipment: Wheel Alignment System

b. On both sides, loosen the toe link nut counterclockwise (CCW) through one complete turn.

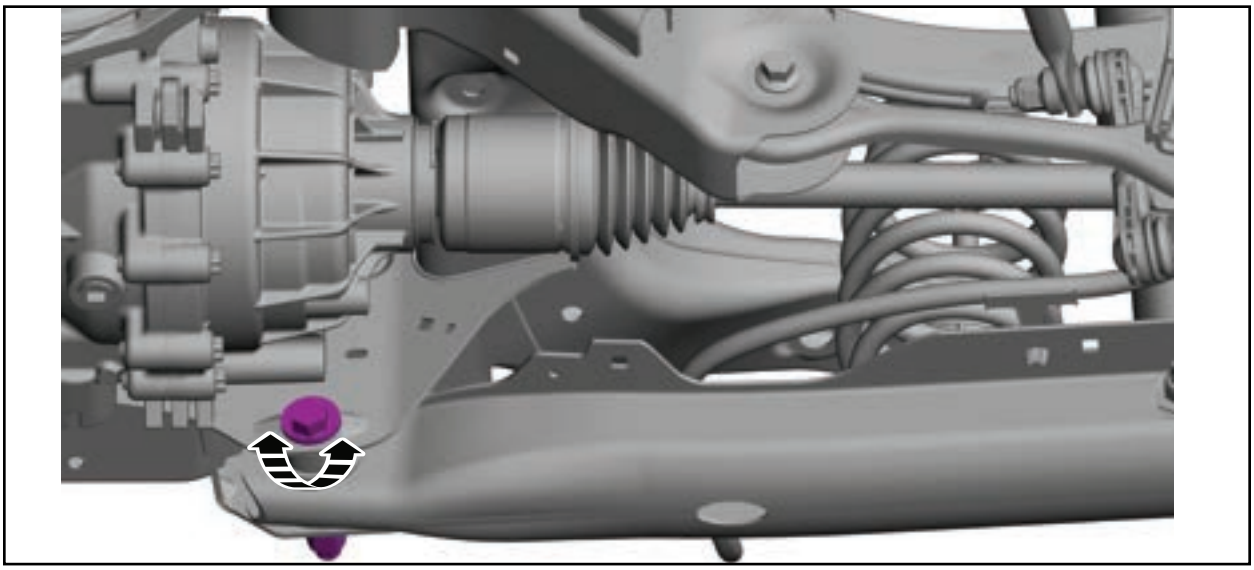
NOTICE: The cam nut and cam bolt area must be free of foreign material to make sure of correct clamping.

NOTE: Clean the general area of the joint to prevent foreign material from entering the joint. Clean the area using only mild liquids.



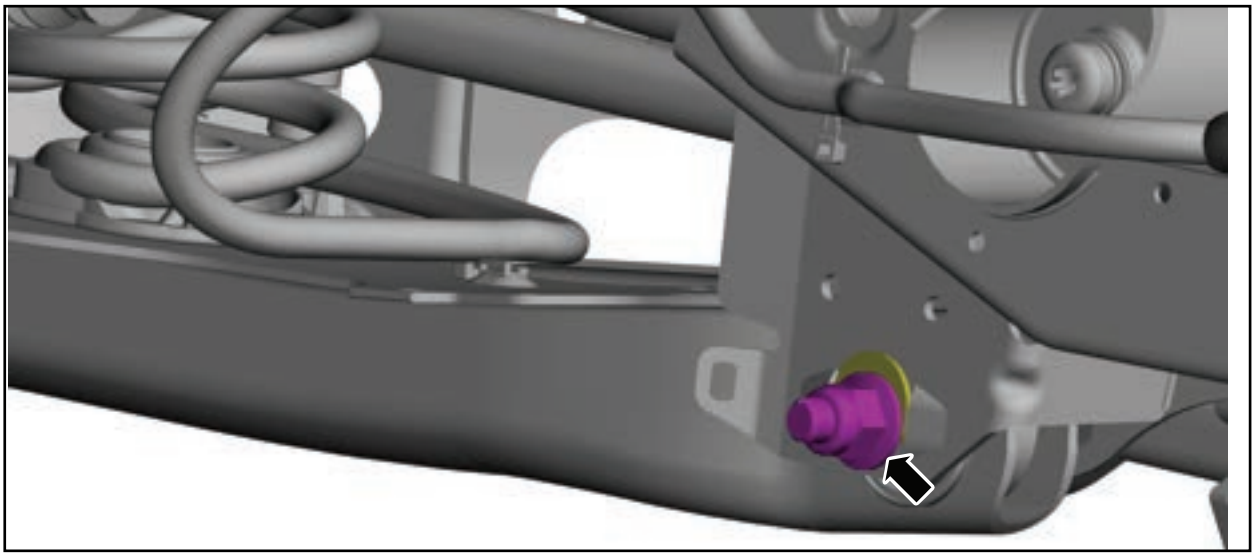
c. Jounce the vehicle to make sure that the suspension is in its normal, at-rest position.

d. On both sides, rotate the toe link bolt to achieve the specified toe setting.



e. On both sides, tighten the toe link nut.
- Torque: 111 lb.ft (150 Nm)

NOTE: Make sure that the toe settings are not disturbed while tightening the nuts.



f. Recheck the rear toe settings and adjust as necessary.

g. If equipped with Lane Departure Warning (LDW) System, connect the scan tool and perform the IPMA camera alignment procedure. Follow the scan tool directions.

NOTE: If equipped with Lane Departure Warning (LDW) System, camera alignment is required for the lane keeping alert and lane keeping aid to function correctly.

h. Road test the vehicle.

74. Check and if necessary adjust front toe.

NOTE: Make sure that the vehicle is standing on a level surface.

NOTE: Before carrying out a toe adjustment, check the tires for the correct pressure. Inspect the tires for incorrect wear or damage. Inspect the suspension for wear or damage.

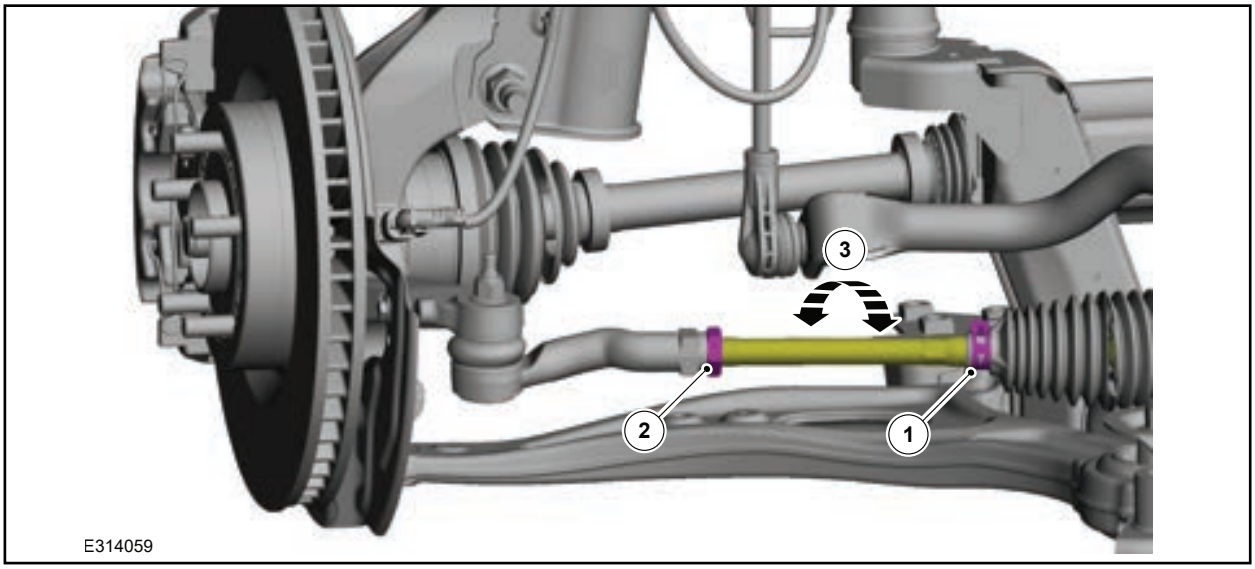
a. Using alignment equipment and the manufacturer's instructions, measure the front toe.

b. Using alignment equipment and the manufacturer's instructions, check the front toe setting on both sides. Use the General Equipment: Wheel Alignment System

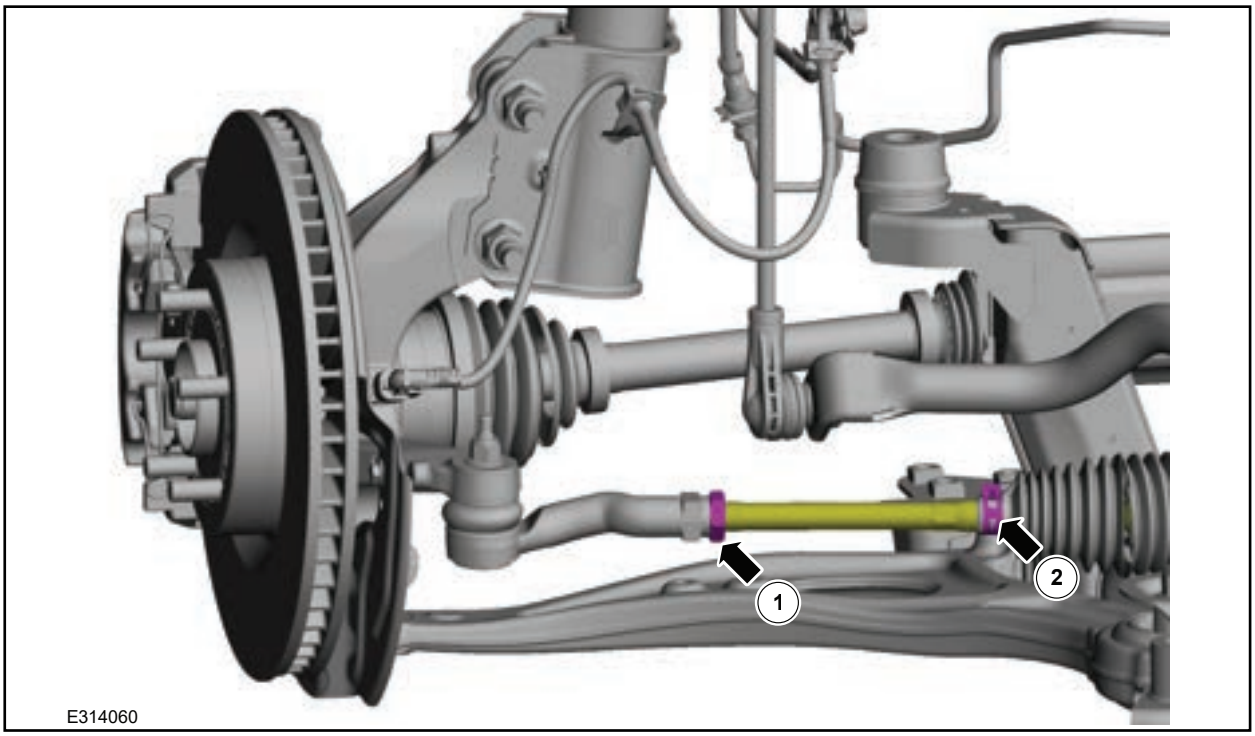
c. On both sides, position aside the steering gear boot clamp, then loosen the outer tie rod end jamb nut. Rotate the inner tie-rods an equal amount in either a clockwise or a counterclockwise direction to adjust the toe setting on both sides.

NOTICE: Hold the tie-rod end stationary with a wrench while loosening the nut or damage to the boot can occur.

NOTE: Do not allow the steering gear bellows to twist when the inner tie rod is rotated.



d. On both sides, tighten the outer tie rod end jamb nut, then position the steering gear boot clamp.
- Torque: 66 lb.ft (90 Nm)



e. Recheck the toe settings and adjust as necessary.

f. Road test the vehicle.