



FORD PERFORMANCE

M-3000-H4 F150 4X4 Lowering Kit

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Please visit www.fordracingparts.com for the most current instruction and warranty 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 PERFORMANCE TECHLINE AT 1-800-367-3788

READ INSTRUCTIONS COMPLETELY THROUGH BEFORE STARTING.
IT IS RECOMMENDED THAT INSTALLATION BE DONE BY A QUALIFIED MECHANIC.
REPLACE ALL STOCK PARTS THAT ARE DAMAGED OR WORN.
ALWAYS WEAR EYE PROTECTION.
ALWAYS USE PROPERLY RATED SAFETY HOIST OR STANDS WHENEVER A PROCEDURE REQUIRES YOU TO BE UNDER A VEHICLE. KNOW AND FOLLOW ALL SAFE WORK PRACTICES TO AVOID SERIOUS INJURY OR DEATH.
CHECK TO SEE THAT ALL PARTS LISTED ARE INCLUDED.
NOTE: AMOUNT OF DROP APPROXIMATE DUE TO FACTORY OPTIONS.

2-COIL SPRINGS
1-PARTS PACK
2-SHACKLES
4-U-BOLTS
8- U-BOLT NUTS
4-SHACKLE BUSHINGS
2-SHACKLE SLEEVES
4-LOWER STEEL STRUT SPACERS
1-TRANSMISSION SPACER
2- UPPER URETHANE COIL SPACERS
2-AXLE WEDGES

FRONT DROP COIL INSTALLATION PROCEDURE.

MEASURE AND DOCUMENT THE VEHICLE HEIGHT FROM FLOOR TO FENDER LIP. MARK AREA WITH PAINTERS TAPE SO BEFORE AND AFTER MEASUREMENTS ARE TAKEN IN SAME LOCATION.

LF _____ RF _____ LR _____ RR _____

1. BEFORE GETTING UNDER VEHICLE, REMOVE THE KEYS FROM THE IGNITION. DISCONNECT THE NEGATIVE BATTERY TERMINAL FROM THE BATTERY. DO NOT MOVE THE STEERING OR TIE RODS LEFT OR RIGHT WHILE DOING THIS INSTALLATION AS **MISALIGNMENT OF THE ELECTRONIC STEERING SYSTEM** MAY RESULT. RAISE VEHICLE USING A HOIST. FOLLOWING PROPER LIFTING PROCEDURES.

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



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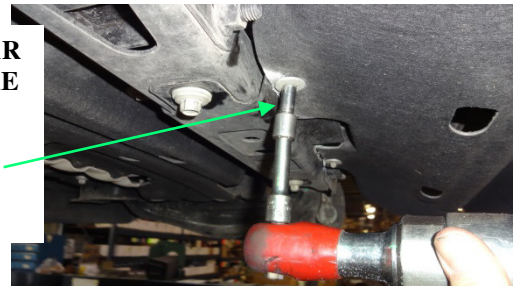
2. REMOVE TIRE AND WHEEL ASSEMBLY.

3. REMOVE THE UPPER CONNECTING LINK HARDWARE FROM THE SWAY BAR ON BOTH SIDES OF VEHICLE, SAVE HARDWARE.



**UPPER SWAY BAR
LINK HARDWARE**

**SPLASH SHIELD
HARDWARE**



4. LOCATE THE SPLASH SHIELD BEHIND THE LOWER CONTROL ARM REAR BOLTS AND REMOVE THE FOUR BOLTS HOLDING THE SPLASH SHIELD TO THE FRAME BRACKETS (THIS WILL ALLOW YOU TO LOOSEN AND REMOVE THE REAR SET OF LOWER CONTROL ARM BOLTS)

5. LOOSEN THE OUTER TIE ROD NUT, USING PROPER REMOVAL TOOL, REMOVE THE TIE ROD JOINT LOOSE FROM THE SPINDLE. REMOVE THE OUTER TIE ROD FROM THE SPINDLE, SAVE NUT, REPEAT TO THE OTHER SIDE OF VEHICLE.

6. THE LOWER CONTROL ARM FRAME MOUNTS HAVE FACTORY ALIGNMENT SLOTS AND MUST BE MARKED BEFORE LOOSENING. THIS PROCEDURE WILL AID IN ADJUSTING THESE BOLTS BACK TO THE CORRECT LOCATION DURING FINAL ASSEMBLY. **SEE PHOTO BELOW**

A. USING A PAINT STICK MARK ALL FOUR LOWER CONTROL ARM MOUNTING BOLT LOCATIONS.

B. LOOSEN BUT DO NOT REMOVE THE FOUR LOWER CONTROL ARM TO FRAME MOUNT BOLTS. THIS NEEDS TO BE DONE SO THAT THE LOWER CONTROL ARM WILL SWING DOWN FAR ENOUGH TO BE ABLE TO REMOVE THE STRUT ASSEMBLY FROM THE VEHICLE. SUPPORT THE LOWER CONTROL ARM.



**LOWER CONTROL ARM TO FRAME
MOUNTING HARDWARE.**

**PAINT STICK MARK SHOWING
FACTORY HARDWARE LOCATION.**

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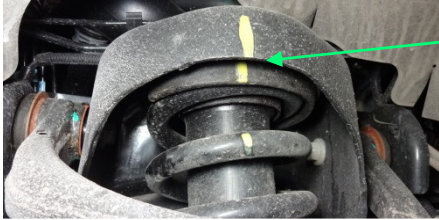


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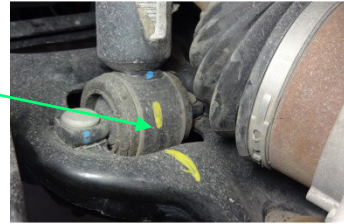
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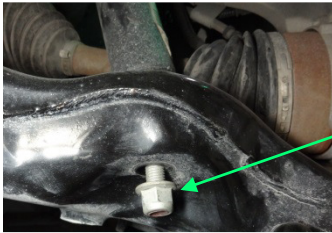
7. MARK THE UPPER AND LOWER STRUT MOUNTS SO THAT WHEN YOU INSTALL THE NEW COIL SPRINGS YOU WILL BE ABLE TO ALIGN THE UPPER AND LOWER STRUT MOUNTS IN THEIR CORRECT LOCATION. MARK THE STRUT ASSEMBLY LEFT AND RIGHT.



UPPER AND
LOWER STRUT
INDEX MARKS



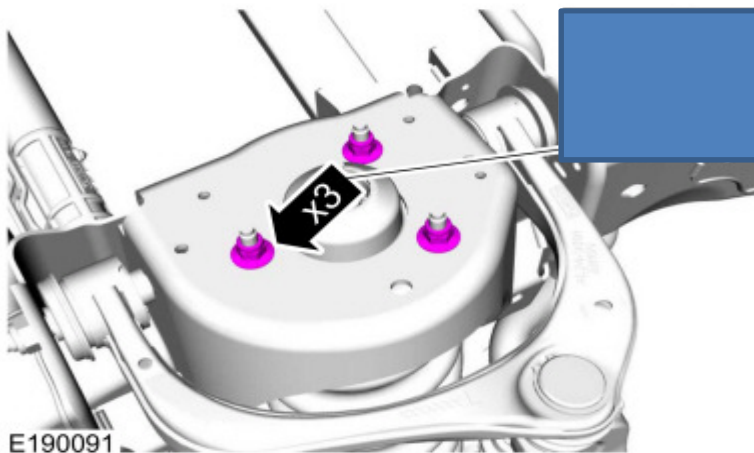
8. LOOSEN AND REMOVE THE TWO LOWER STRUT MOUNTING NUTS LOCATED UNDER THE LOWER CONTROL ARM, SAVE HARDWARE.



LOWER STRUT MOUNTING HARDWARE LOCATION.

WARNING: THE COIL SPRING ASSEMBLY IS UNDER PRESSURE, DO NOT REMOVE THE CENTER UPPER STRUT ROD NUT.

9. LOOSEN THE UPPER THREE OUTER NUTS THAT ATTACHING THE STRUT ASSEMBLY TO THE VEHICLE FRAME.



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10. SUPPORT THE LOWER CONTROL ARM WITH A JACK (UNDER THE CROSS BRACE) NOTE THE DIRECTION OF THE MOUNTING HARDWARE THAT ATTACHES THE LOWER CONTROL ARM TO FRAME MOUNTS. REMOVE THE LOWER CONTROL ARM TO FRAME HARDWARE (REFER TO PHOTOS BELOW).

11. LOWER THE JACK SLIGHTLY UNDER THE LOWER CONTROL ARM, REMOVE THE UPPER OUTER THREE STRUT TO FRAME NUTS AND REMOVE THE STRUT ASSEMBLY FROM THE VEHICLE, SAVE HARDWARE.

**DRIVERS SIDE FRONT SHOWN WITH
STRUT REMOVED**

LOWER CONTROL ARM CROSS BRACE

**LOWER CONTROL ARM
BEING LOWERED AWAY
FROM LOWER STRUT
MOUNTING STUDS**



12. REPEAT STRUT REMOVAL PROCEDURE TO OTHER SIDE OF VEHICLE.

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NEW COIL SPRING INSTALLATION PROCEDURE

13. COIL SPRING INDEXING.

A. IT IS VERY IMPORTANT TO PLACE INDEX MARKS ON THE UPPER AND LOWER STRUT SPRING MOUNTS SO THAT ONCE THE STRUT IS DISASSEMBLED AND REASSEMBLED YOU CAN ALIGN THE UPPER AND LOWER MOUNTS IN THE CORRECT LOCATION.

14. COMPRESS THE STRUT ASSEMBLY STOCK COIL SPRING USING A STRUT/COILOVER COMPRESSOR. FOLLOW THE STRUT/COILOVER COMPRESSOR INSTRUCTIONS.

WARNING: THE COIL IS UNDER PRESSURE. EXTREME CARE MUST BE TAKEN WHEN REMOVING AND INSTALLING THE COILS TO AVOID INJURY.



UPPER STRUT CAP INDEX MARK

STRUT ASSEMBLY COMPRESSED IN A STRUT COMPRESSOR.

LOWER STRUT MOUNT INDEX MARK

15. ONCE THE SPRING IS COMPRESSED REMOVE THE CENTER UPPER STRUT ROD NUT WHILE HOLDING THE STRUT SHAFT FROM SPINNING INSIDE OF THE STRUT. SAVE HARDWARE

A. REMOVE THE UPPER STRUT MOUNT FROM THE STRUT.

B. REMOVE THE UPPER RUBBER SPRING SEAT FROM THE STRUT.

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**SUPPLIED ¼" THICK
URETHANE SPACER BEING
INSTALLED INTO THE
UPPER STEEL SPRING SEAT
ABOVE THE FACTORY
RUBBER SPRING SEAT**

C. REMOVE THE STRUT FROM THE COIL SPRING.

D. REMOVE THE STOCK COIL FROM THE STRUT/COILOVER COMPRESSOR.

16. INSTALL THE SUPPLIED URETHANE ¼" THICK SPACER INTO THE UPPER STEEL STRUT CAP UNDER THE FACTORY RUBBER SEAT.

17. COIL TO STRUT SHOCK INSTALLATION PROCEDURE. FOLLOW THE STRUT/COILOVER COMPRESSOR INSTRUCTIONS.

WARNING: THE COIL IS UNDER PRESSURE. EXTREME CARE MUST BE TAKEN WHEN AND INSTALLING THE COILS TO AVOID INJURY.

A. INSTALL THE NEW COIL SPRING INTO THE COILOVER/STRUT COMPRESSOR (SMALL END GOES DOWN) AND COMPRESS THE NEW COIL.

B. INSTALL THE STOCK STRUT UP THROUGH THE NEW DROP COIL.

C. INSTALL THE STOCK UPPER RUBBER ISOLATOR WITH THE URETHANE SPACER AND STEEL SPRING SEAT ONTO THE TOP OF THE COIL. MAKE SURE THAT THE UPPER COIL IS LOCATED AGAINST THE UPPER COIL STOP AND THAT THE RUBBER ISOLATOR IS LOCATED CORRECTLY IN THE SPRING SEAT. **SEE THE PHOTO ON THE NEXT PAGE.**

D. LOCATE THE UPPER SPRING SEAT INDEX MARK AND ALIGN IT WITH THE LOWER SPRING SEAT INDEX MARK.

E. APPLY BLUE THREADLOCKING COMPOUND, INSTALL THE UPPER STRUT CENTER RETAINING NUT TO THE STRUT SHAFT. WHILE HOLDING THE SHOCK ROD, TORQUE THE SHOCK ABSORBER NUT. *Torque:* 41 lb.ft (55 Nm)

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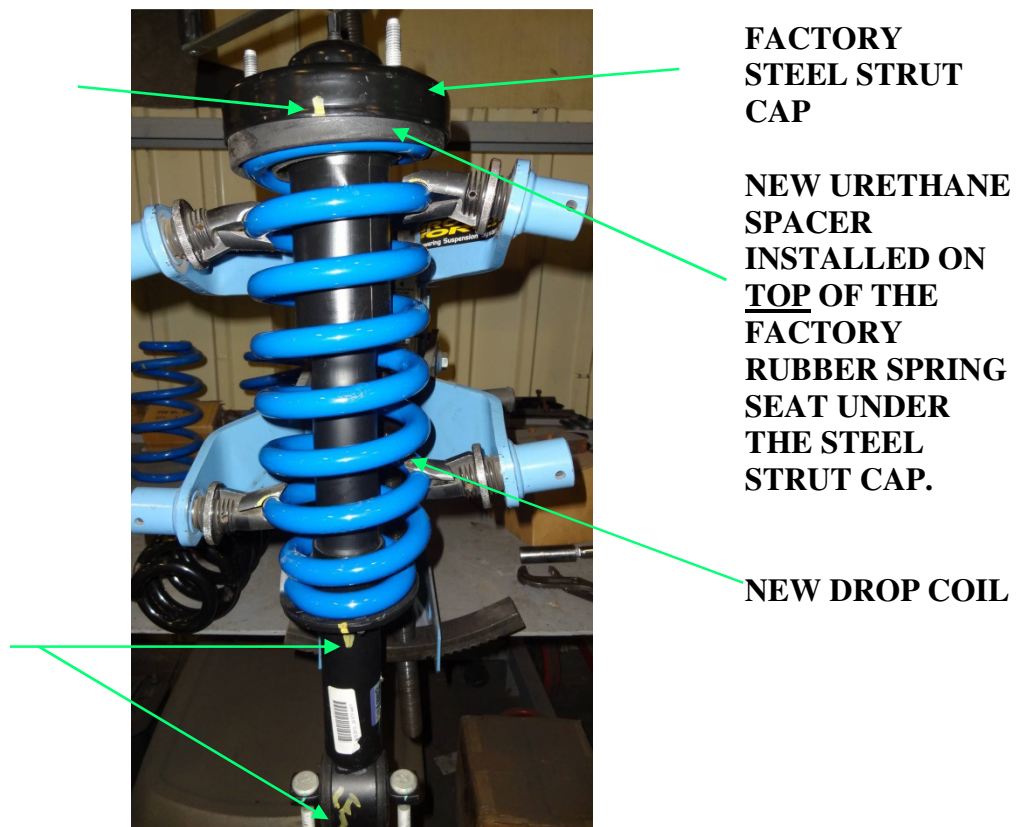
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F. ONCE THAT YOU ARE SURE THE COIL IS LOCATED CORRECTLY ON THE STRUT REMOVE THE STRUT/COIL ASSEMBLY FROM THE COMPRESSOR. FOLLOW THE STRUT COMPRESSOR INSTRUCTIONS.

G. REPEAT COIL INSTALLATION TO THE OTHER STRUT.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!



18. STRUT TO VEHICLE INSTALLATION.

NOTE: SOME OF THE 2015⁺ F-150 PICKUPS WILL ONLY REQUIRE APPROXIMATELY 1.250" TO 1.5" OF DROP TO GET THE STANCE CORRECT AND SOME WILL REQUIRE

APPROXIMATELY 1.50" TO 1.75" OF DROP TO GET THE STANCE CORRECT ON THE VEHICLE. WE HAVE INCLUDED LOWER STRUT MOUNT STEEL SPACERS THAT CAN BE

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INCLUDED DURING THIS STEP IF YOU NEED BETWEEN 1.25 AND 1.50" OF DROP. IF YOU ARE LOOKING FOR THE FULL AMOUNT OF DROP DO NOT INSTALL THE SUPPLIED LOWER STRUT STEEL SPACERS.

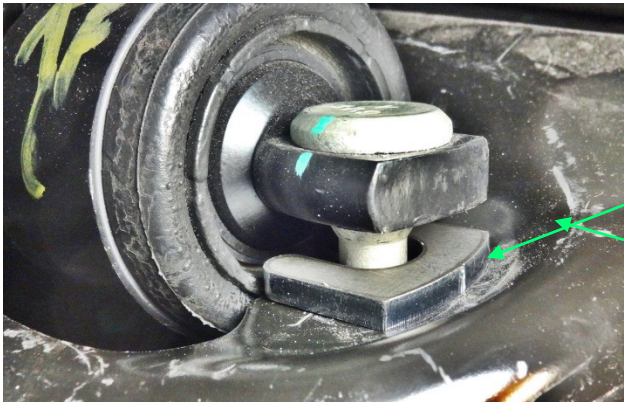
A. INSTALL THE STRUT ASSEMBLY INTO THE STOCK LOCATION.

B. ALIGN AND INSTALL THE THREE STUDS UP INTO THE THREE HOLES IN THE FRAME UPPER MOUNT.

C. INSTALL THE THREE UPPER STRUT LOCKNUTS (JUST **START** THE NUTS AS THE UPPER STRUT MOUNT WILL NEED TO MOVE SOME WHEN THE LOWER STRUT STUDS ARE BEING LINED UP WITH THE LOWER CONTROL ARM).

D. USING THE LCA CROSS BRACE AS A JACKING POINT, JACK UP THE LOWER CONTROL ARM AND LINE UP THE LOWER STRUT MOUNTING STUDS INTO THE LOWER CONTROL ARM AND **JUST START** THE FACTORY LOWER STRUT RETAINING NUTS, IF YOU ARE GOING TO INSTALL THE SUPPLIED LOWER STRUT STEEL SPACERS, MOVE TO THE NEXT STEP BEFORE INSTALLING THE LOWER STRUT RETAINING NUTS.

E. IF YOU ARE LOOKING FOR THE **MINIMUM** AMOUNT OF DROP, INSTALL THE SUPPLIED METAL SPACERS BETWEEN THE BOTTOM OF THE STRUT MOUNT AND THE TOP OF THE LOWER CONTROL ARM STRUT MOUNT, OVER THE FACTORY STRUT STUD AS SHOWN BELOW AND JUST START THE FACTORY LOWER STRUT RETAINING NUTS.



SUPPLIED LOWER METAL STRUT SPACER INSTALLED BETWEEN THE BOTTOM OF THE LOWER STRUT MOUNT AND THE TOP OF THE LOWER CONTROL ARM.

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F. CONTINUE TO JACK UP THE LOWER CONTROL ARM LINING UP THE CONTROL ARM INTO THE FRAME MOUNTING POCKETS, REINSTALL THE FACTORY LOWER CONTROL ARM TO FRAME MOUNTING HARDWARE IN THE SAME DIRECTION AS REMOVED JUST **START** THE NUTS.

G. INSTALL THE CONNECTING LINK UP INTO THE SWAY BAR AND JUST START THE FACTORY RETAINING NUT.

H. REPEAT STRUT INSTALLATION PROCEDURE TO THE OTHER SIDE OF VEHICLE.

I. TORQUE THE LOWER STRUT MOUNTING HARDWARE TO 66 lb.ft (90 Nm)

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

19. REPOSITION THE JACK OUT TOWARD THE SPINDLE SIDE OF THE LOWER CONTROL ARM AND JACK THE SUSPENSION UP TO RIDE HEIGHT (MAKE SURE YOUR SAFETY STANDS ARE SECURE UNDER THE VEHICLE). WITH THE HELP OF AN ASSISTANT LINE UP THE LOWER CONTROL ARM MOUNTING HARDWARE TO THE MARKS MADE IN STEP NO. 6 AND TORQUE THE

LOWER CONTROL ARM TO FRAME MOUNTING BOLTS TO 258 lb.ft (350 Nm) REPEAT TO THE OTHER SIDE OF VEHICLE.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

20. TORQUE THE UPPER THREE STRUT NUTS TO 52 lb.ft (70 Nm)

21. WITH THE STRUT AND LOWER CONTROL ARM NOW TIGHTENED TO SPEC LOWER THE JACK UNDER THE LOWER CONTROL ARM UNTIL THE SUSPENSION IS FREE HANGING.

A. WITH THE STEERING TIE RODS **STILL DISCONNECTED** TURN THE STEERING KNUCKLES FROM COMPLETE LEFT LOCK TO COMPLETE RIGHT LOCK BY HAND AND VERIFY THAT YOU HAVE **CLEARANCE** BETWEEN THE LOWER STRUT MOUNT AND THE OUTER CV BOOT AS SHOWN BELOW. THIS SYSTEM WAS DESIGNED TO HAVE CLEARANCE WITH FACTORY CV BOOTS. IF YOU WOULD HAVE CONTACT BETWEEN THE OUTER CV BOOT AND THE LOWER STRUT MOUNT REMOVE THE LOWER STRUT METAL SPACERS THAT WERE INSTALLED IN STEP 18 RECHECK THE CLEARANCE.

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CLEARANCE BEING CHECKED BETWEEN THE OUTER CV BOOT AND THE LOWER STRUT MOUNT. MAINTAIN A MINIMUM OF 1/8" AT THE CLOSEST POINT WITH THE SUSPENSION HANGING IN THE FULL DROOP POSITION.

22. REINSTALL THE TIE RODS TO THE SPINDLES AND TORQUE TO 76 lb.ft (103 Nm).

23. TORQUE THE UPPER CONNECTING LINK NUTS TO 59 lb.ft (80 Nm) ON BOTH SIDES OF THE VEHICLE.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

24. REINSTALL THE SPLASH SHIELD INTO THE FACTORY POSITION AND INSTALL THE FACTORY HARDWARE AND TORQUE TO SPEC.

25. MAKE SURE ALL FASTENERS AFFECTED BY THIS PROCEDURE ARE TORQUED TO SPEC.

26. REINSTALL TIRE AND WHEEL ASSEMBLY.

⚠ 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.*

Tighten the wheel nuts
Torque: 150 lb.ft (204 Nm)

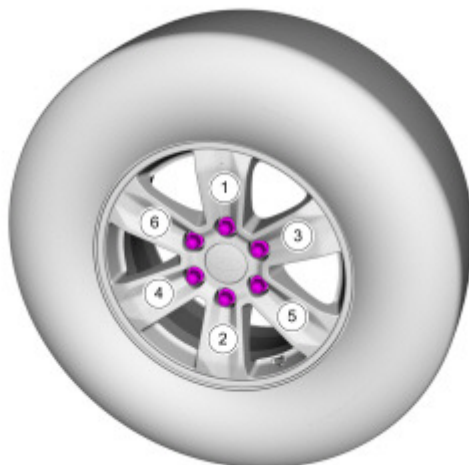
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28 CHECK AND MAKE SURE THAT ALL INSTALLATION STEPS HAVE BEEN COMPLETED.
CHECK ALL NUTS AND BOLTS FOR TORQUE AFTER THE FIRST 300 MILES.

29. MAKE SURE THERE ARE NO CLEARANCE PROBLEMS. ROTATE THE STEERING LOCK TO
LOCK UNDER FULL WEIGHT OF THE VEHICLE AND FULL SUSPENSION TRAVEL.

Removal, Rear Leaf Springs

⚠ WARNING: Do not apply heat or flame to the shock absorber or strut tube. The shock absorber and strut tube are gas pressurized and could explode if heated. Failure to follow this instruction may result in serious personal injury.

⚠ WARNING: Keep all body parts clear of shock absorbers or strut rods. Shock absorbers or struts can extend unassisted. Failure to follow this instruction may result in serious personal injury.

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.

All vehicles

1. Remove the wheel and tire.
2. Support the rear axle assembly.

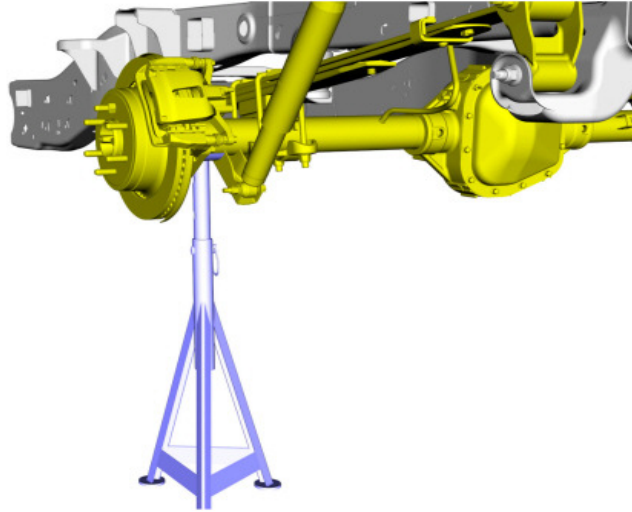
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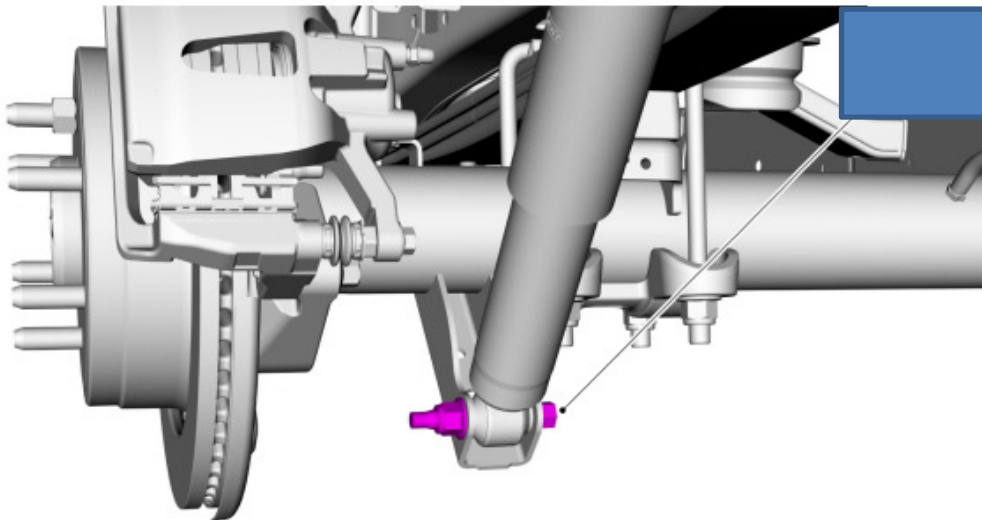
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3.

1. Remove the rear shock absorber lower nut and bolt. Save fasteners for reuse.



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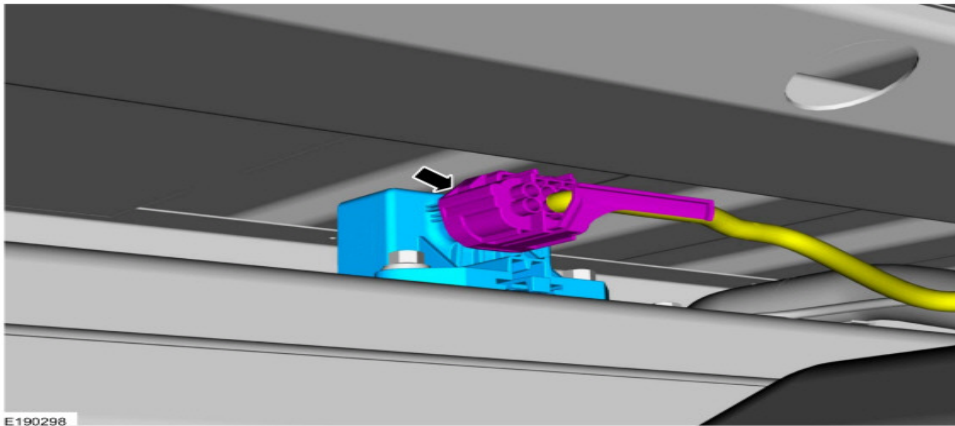
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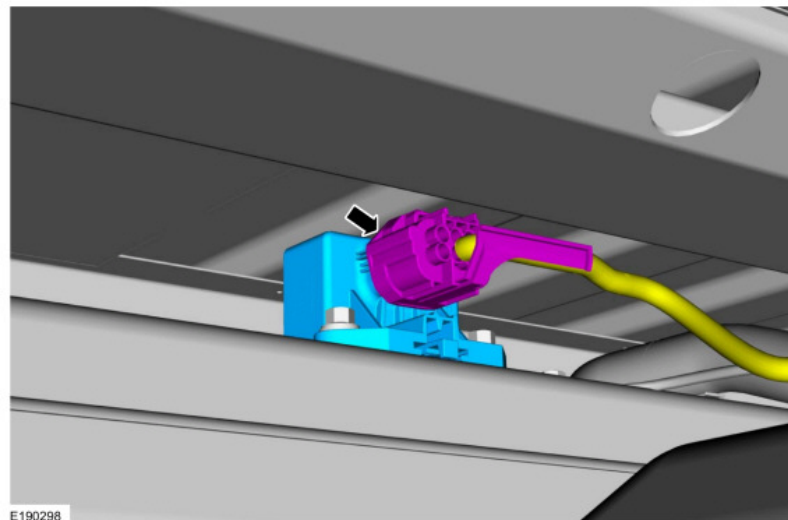


2.Start the engine and allow it to idle until it stalls.

3.After the engine stalls, crank the engine for approximately 5 seconds to make sure the fuel rail pressure has been released.

4.Turn the ignition switch to the OFF position.

5.When the fuel system service is complete, reconnect the Fuel Pump Control Module electrical connector.



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6. Cycle the ignition key and wait 3 seconds to pressurize the fuel system. Check for leaks before starting the engine.

7. When service on the fuel system is completed, start the engine and check for leaks.

Drain the fuel tank

Draining the fuel tank requires removal of the driveshaft.

1. Index-mark the driveshaft flange to the pinion flange to maintain alignment during installation.
2. Remove and save the driveshaft flange to pinion flange bolts.
Torque: 76 lb.ft (103 Nm)

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

3. **NOTICE:** The driveshaft flange fits tightly on the flange pilot. Never hammer on the driveshaft or any of its components to disconnect the driveshaft flange from the flange pilot. Pry only in the area shown with a suitable tool, to disconnect the driveshaft flange from the flange pilot or damage to the driveshaft flange can occur.

Using a large flat headed screwdriver or tire lever, separate the driveshaft flange from the pinion flange.

4. Support the driveshaft.

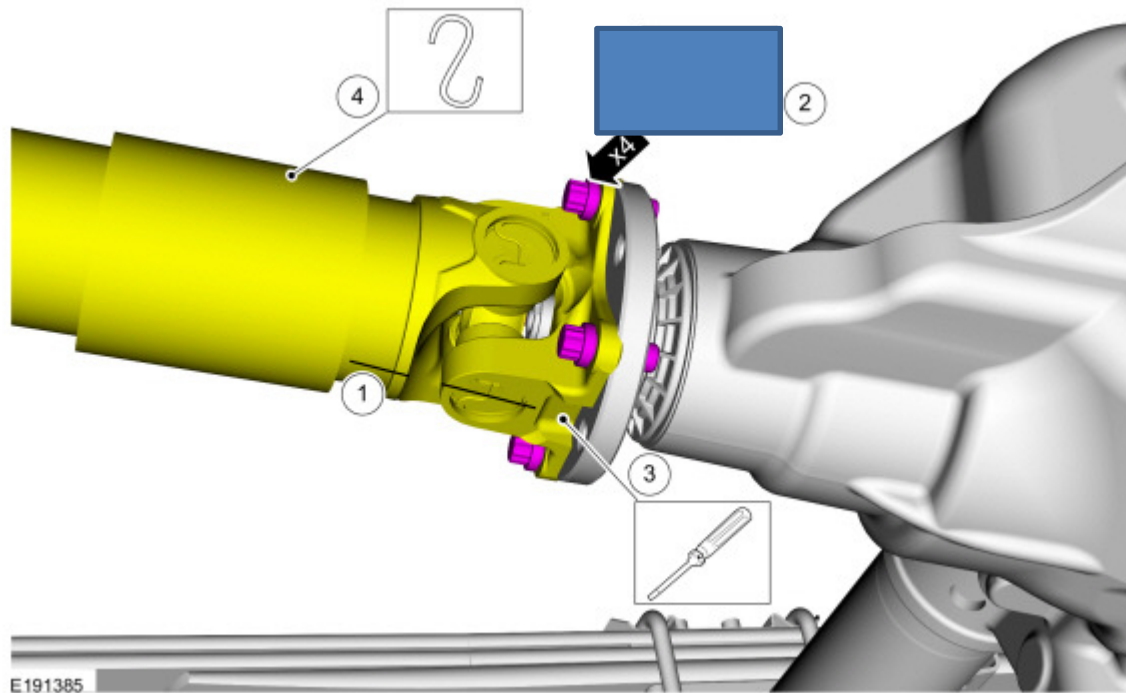
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Vehicles equipped with a 4 bolt style yoke

1. Index-mark the driveshaft flange to the transmission flange to maintain alignment during installation.
2. **NOTICE:** The driveshaft flange fits tightly on the pinion flange pilots. To make sure that the driveshaft flanges seat squarely on the pinion flange pilots, tighten the driveshaft flange bolts evenly in a cross pattern or damage to the flanges can occur.

Remove and save the driveshaft flange to transmission flange bolts.

Torque: 76 lb.ft (103 Nm)

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NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

3. **NOTICE:** The driveshaft flange fits tightly on the flange pilot. Never hammer on the driveshaft or any of its components to disconnect the driveshaft flange from the flange pilot. Pry only in the area shown with a suitable tool, to disconnect the driveshaft flange from the flange pilot or damage to the driveshaft flange can occur.

NOTE: *The driveshaft flange to transmission flange is a tight fit. It may be necessary to remove the center bearing bolts before the driveshaft flange will separate from the transmission flange.*

Using a large flat headed screwdriver or tire lever, separate the driveshaft flange from the transmission flange.

4. Support the driveshaft.

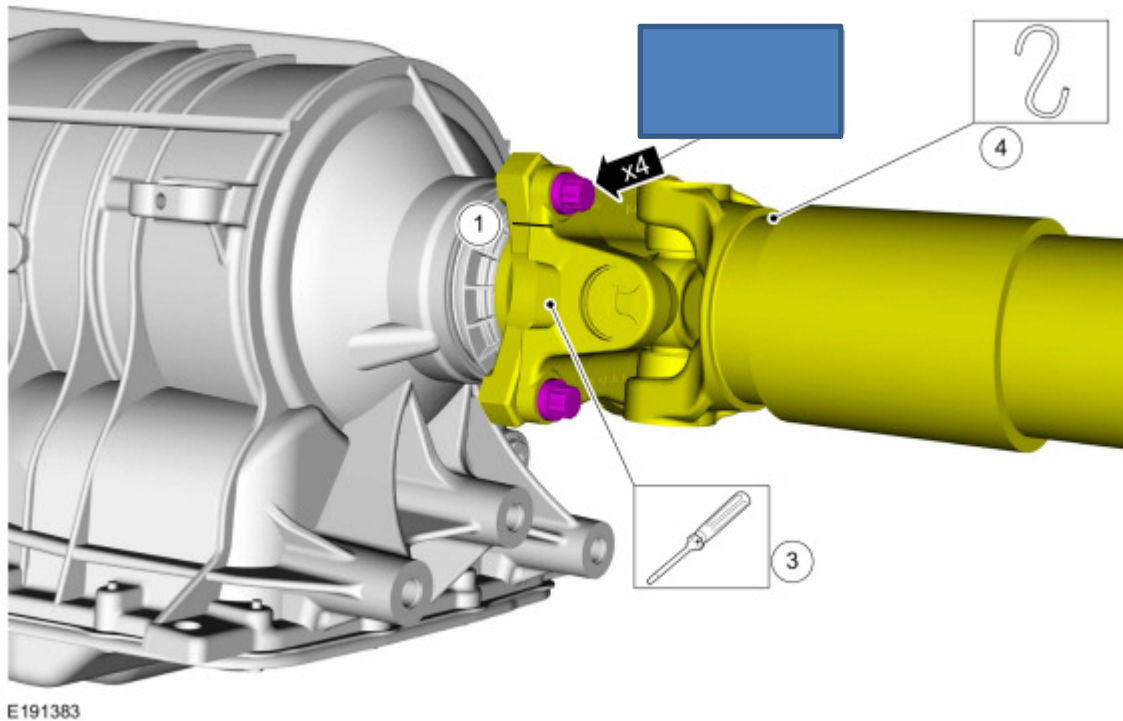
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5.If equipped with a 2 piece driveshaft, remove and save the driveshaft center bearing bolts and remove the driveshaft.

Torque: 35 lb.ft (48 Nm)

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

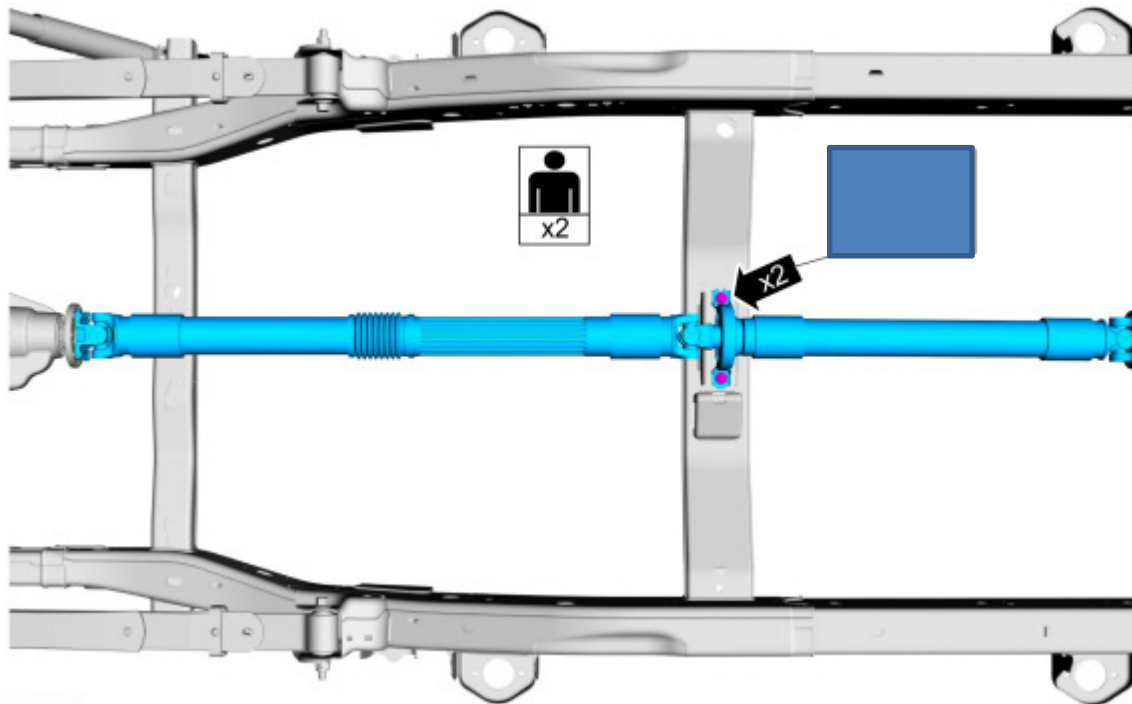
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Vehicles equipped with a slip yoke

6.If equipped with a 2 piece driveshaft.
Remove and save the driveshaft center bearing bolts.
Torque: 35 lb.ft (48 Nm)

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

7.Remove the driveshaft.

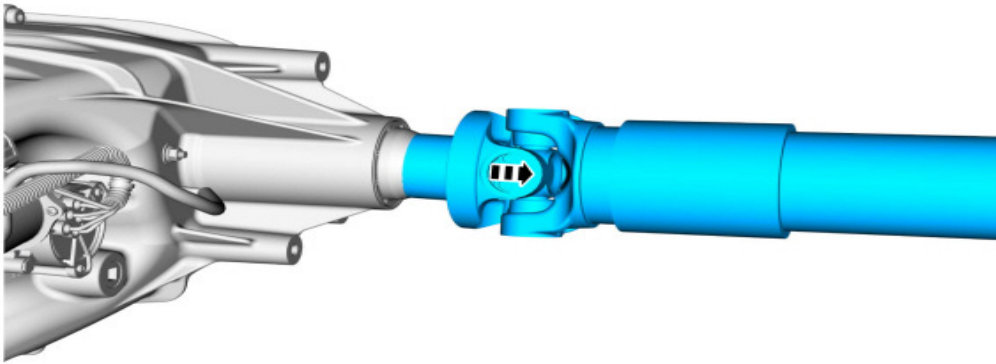
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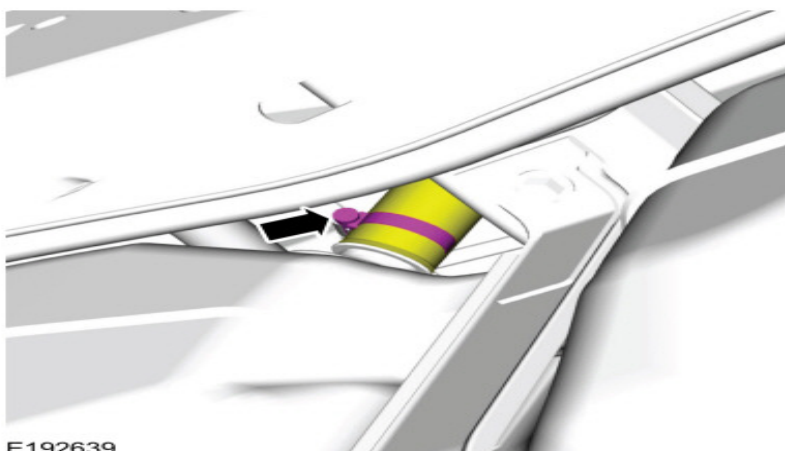


E191384

Drain fuel tank

NOTE: *Some residual fuel may remain in the fuel tank filler pipe. Carefully drain into a suitable container.*

1. Release the clamp and position the fuel filler pipe hose aside.



E192639

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

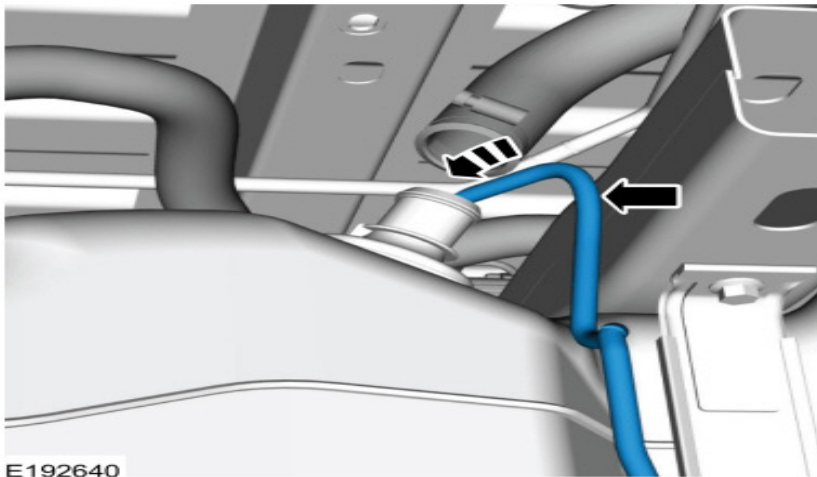


FORD PERFORMANCE

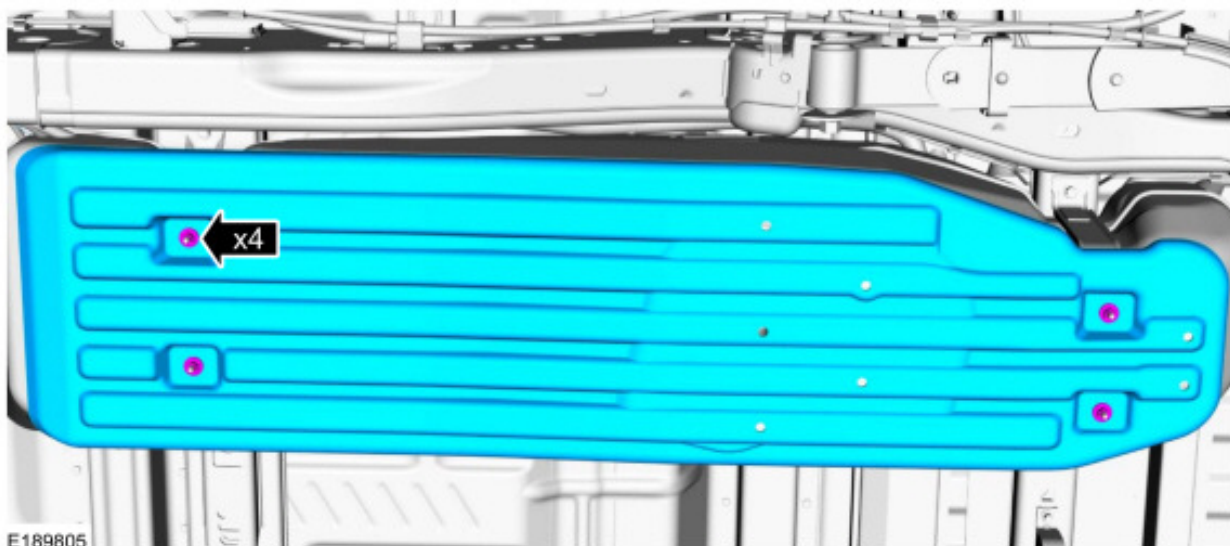
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2. Insert the hose from the Fuel Tanker (NOT INCLUDED) and siphon the fuel through the fuel tank inlet spout.



3. If equipped, remove the nuts and the skid plate.



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

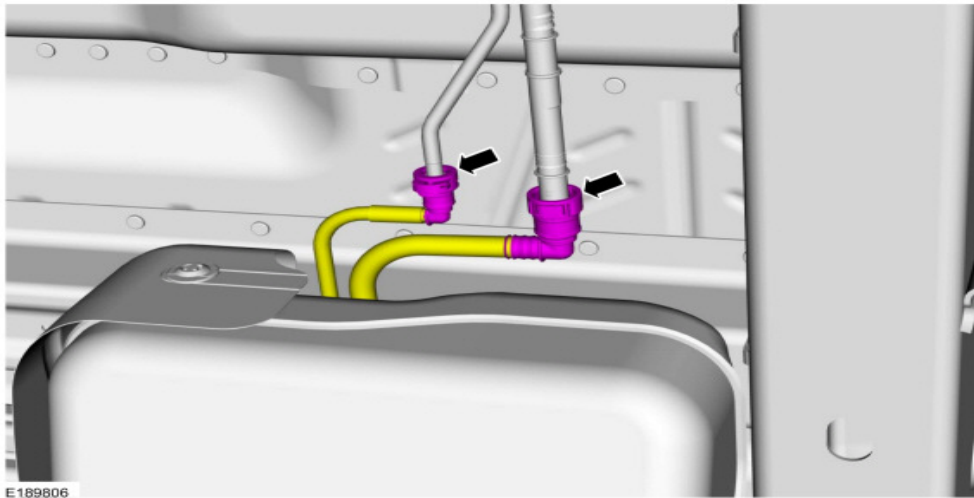


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M-3000-H4 F150 4X4 Lowering Kit

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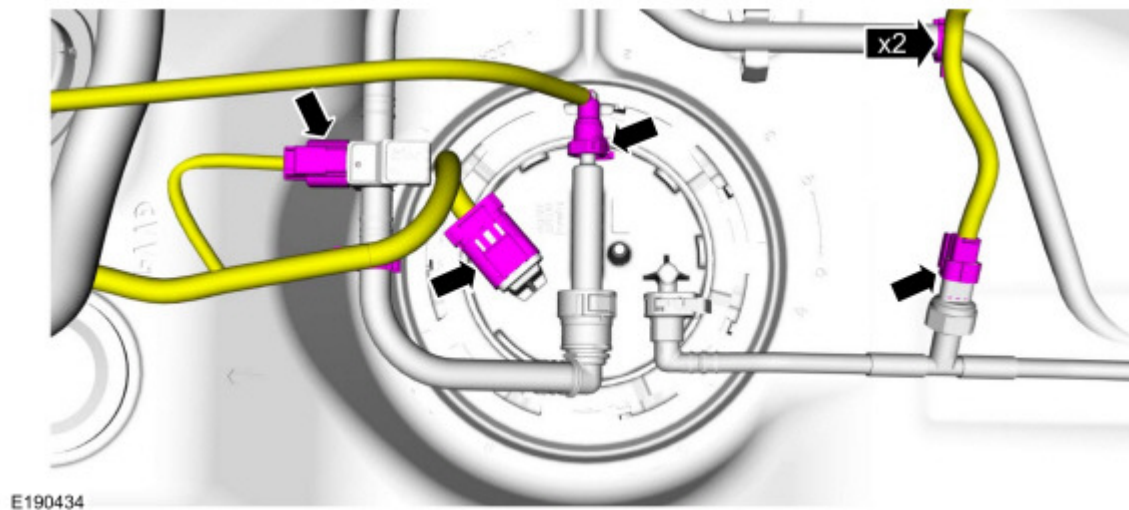
4. Disconnect the fuel feed and vapor tube quick release couplings.



5. Disconnect the fuel tank filler pipe vent tube quick release coupling.

6. Disconnect the electrical connectors and release the harness retainer clip.

(3.5 EcoBoost shown)



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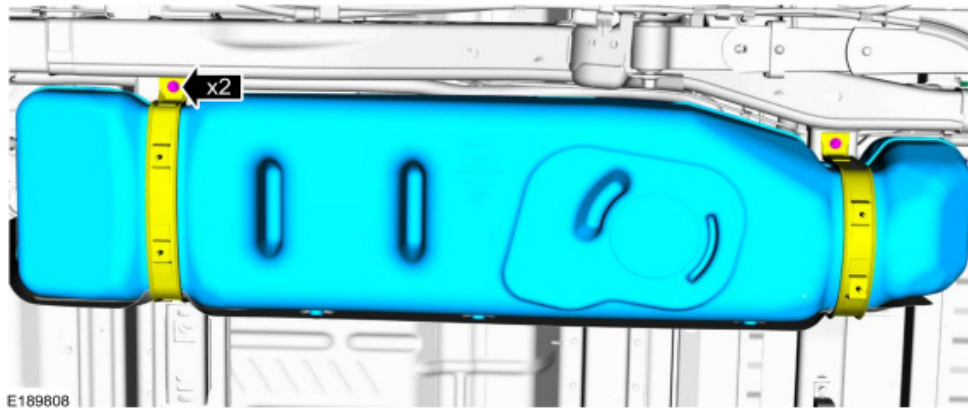
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6. Using a lift, support the fuel tank.

- Remove the bolts.
Torque: 30 lb.ft (40 Nm)
- Position aside the fuel tanks straps and remove the fuel tank.



For the RH spring.

Remove the muffler to gain access to the spring-to-frame bolt.

Removal

NOTE: Muffler and tailpipe assemblies will vary in configuration with different wheelbases and powertrains. Typical application shown.

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

NOTE: Clean all exhaust connections before reassembly.

1. Loosen the clamp.

Torque: 35 lb.ft (48 Nm)

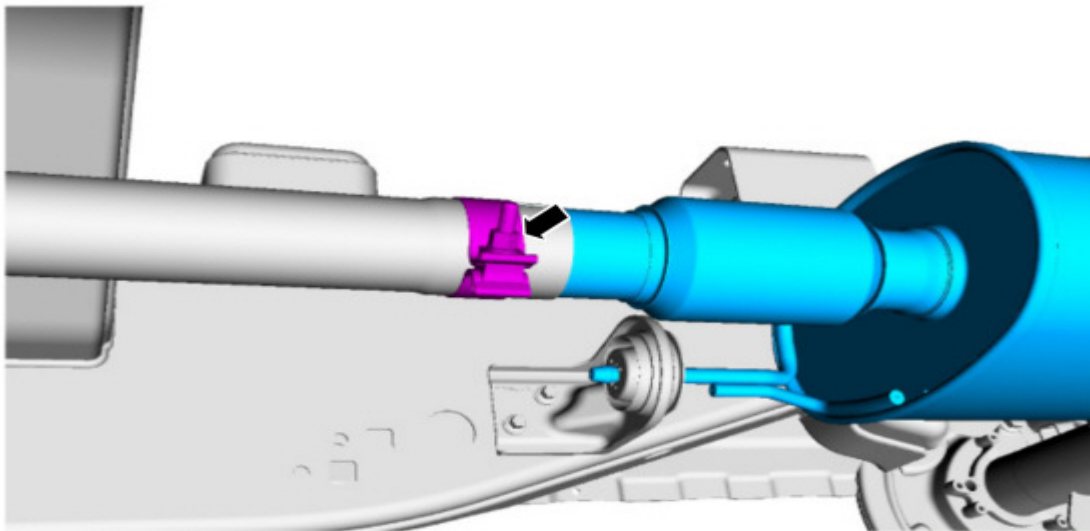
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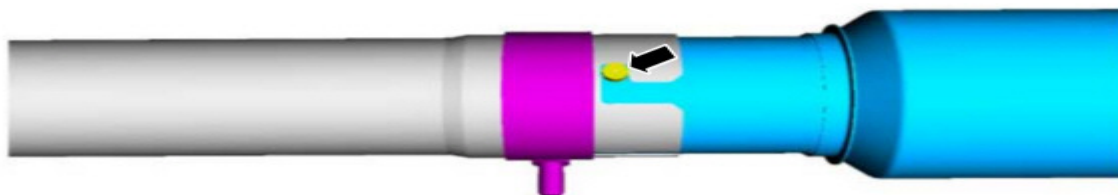
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E194338

2. Release the locator tab out of the muffler inlet pipe.



E194340

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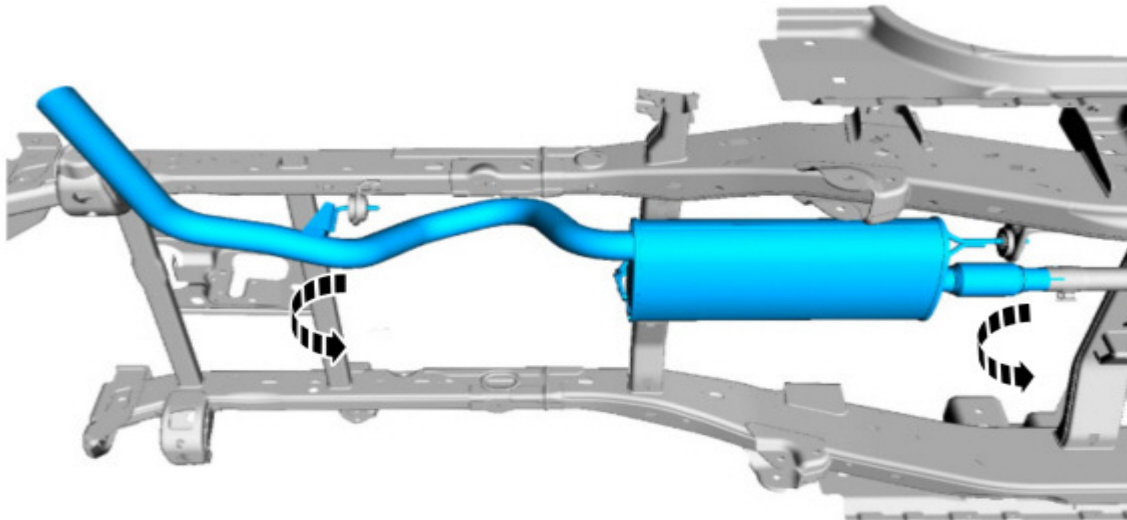


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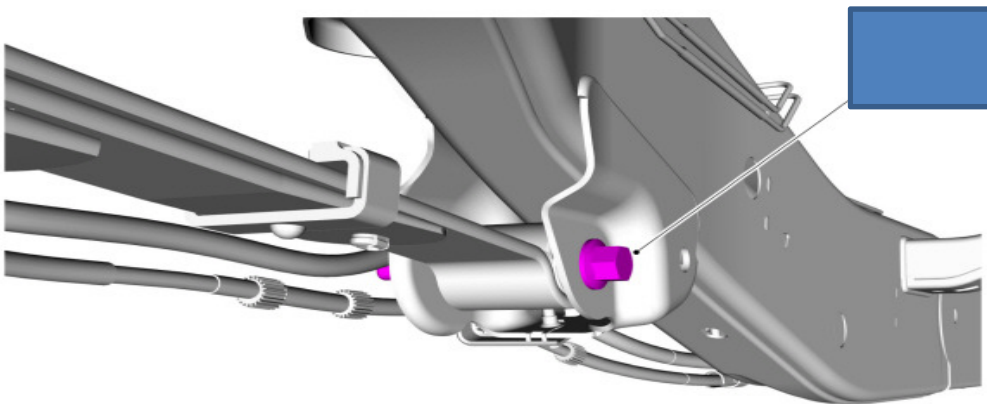
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3. Slide the muffler and tailpipe rearward out of the isolators and then forward to remove.



E194339

4. Remove and save the spring-to-frame nut and bolt.



E191517

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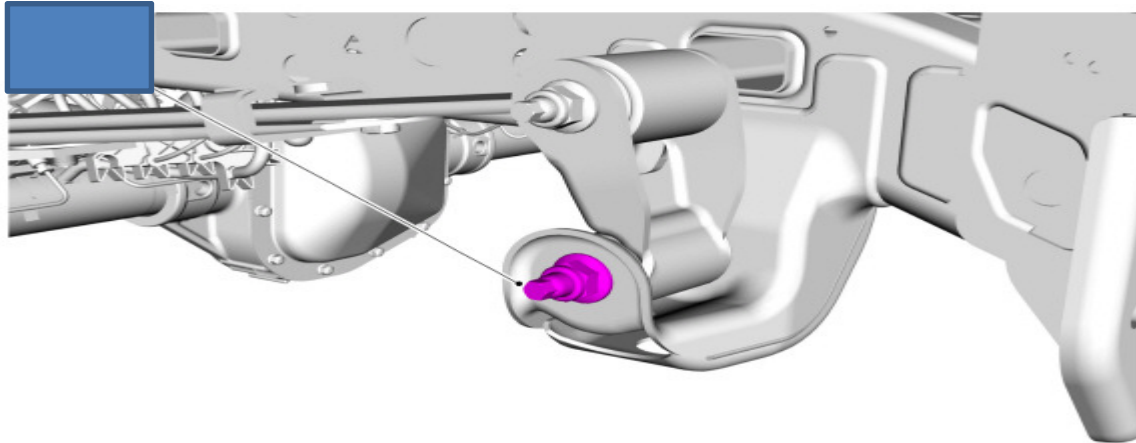


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5. Remove and save the spring shackle-to-frame nut and bolt.

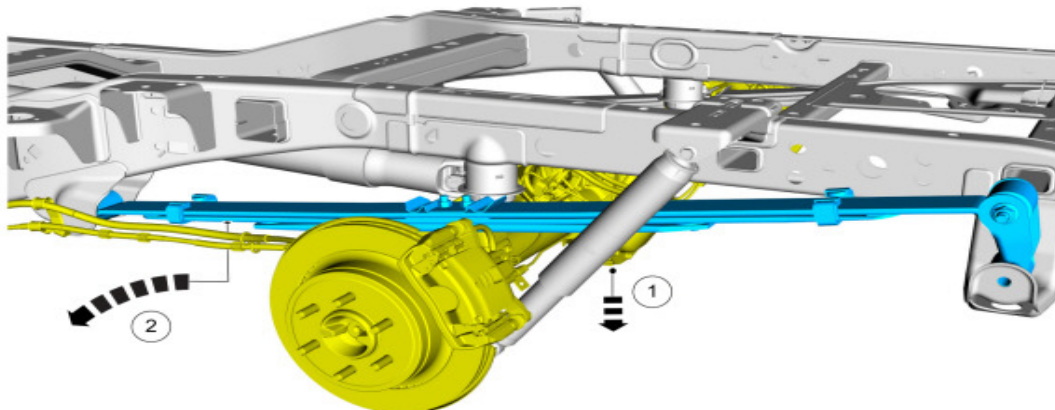


E191518

NOTE: Only lower the axle enough to gain access to remove the spring.

6. Lower the axle.

7. Remove the spring and shackle assembly.



E191519

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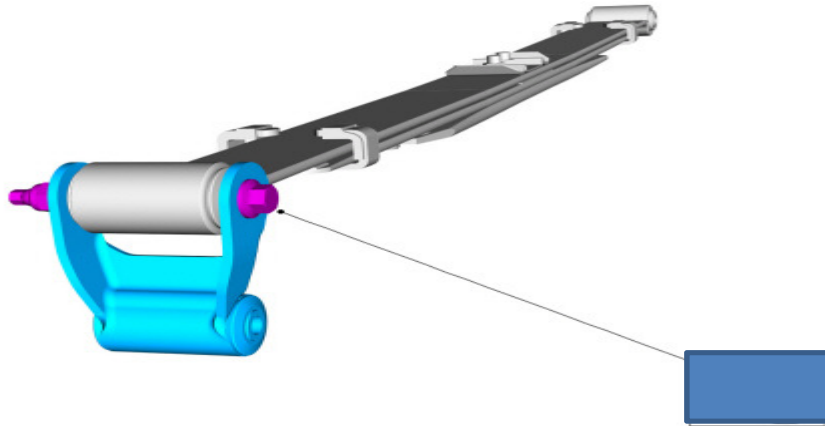


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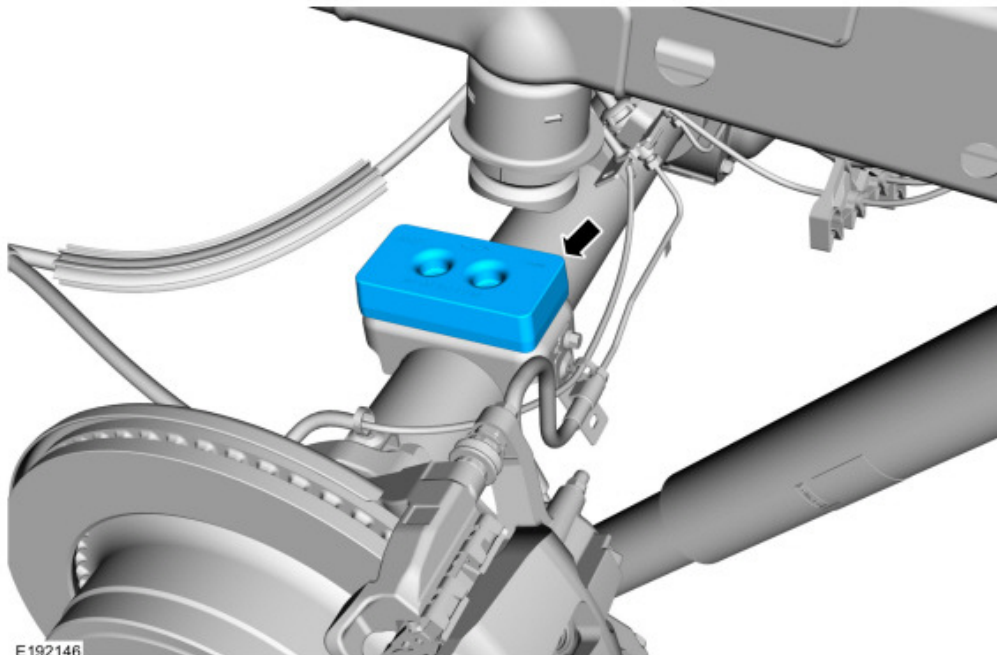
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8. Remove and save the spring-to-shackle bolt and nut and remove the spring shackle.



E191520

9. Remove the 4WD spring spacer.



E192146

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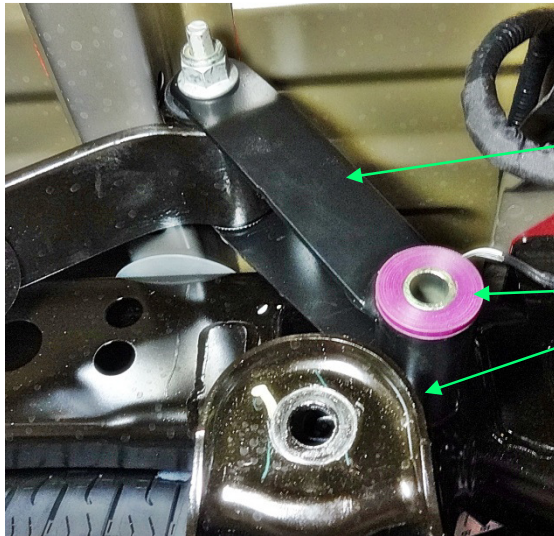
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Install shackles

1. **GREASE** THE NEW SHACKLE BUSHINGS (INSIDE, OUT AND THE FACE OF THE BUSHINGS). **GREASE** THE STEEL SLEEVES AND THE INSIDE OF THE LOWER SHACKLE TUBES. INSTALL THE **GREASED** SHACKLE BUSHINGS AND SLEEVES INTO THE **GREASED** LOWER SHACKLE TUBES (HIGH TEMP WHEEL BEARING GREASE WORKS FINE). **NOTE:** IF YOU DO NOT GREASE THESE POINTS **BEFORE** THE SHACKLE IS ASSEMBLED THE BUSHINGS WILL SQUEAK.

DROP SHACKLE INSTALLATION



**REAR SHACKLE INSTALLED
WITH OPEN END TOWARD
THE FRONT OF VEHICLE.**

**GREASE THE BUSHINGS AND
THE FRAME TO BUSHING
AREA.**

- A. INSTALL THE NEW DROP SHACKLE OVER THE REAR LEAF SPRING EYE WITH THE **OPEN** END OF THE SHACKLE TOWARD THE FRONT.
- B. INSTALL THE STOCK UPPER BOLT (WITH THE HEAD INBOARD) THROUGH THE NEW SHACKLE AND THE STOCK LEAF SPRING, INSTALL THE STOCK NUT AND JUST **SNUG** AT THIS TIME.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

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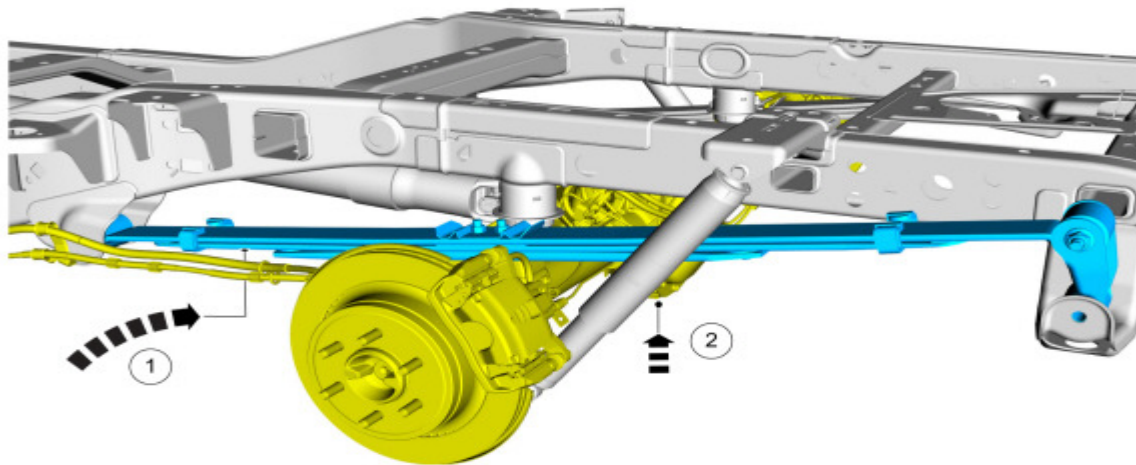
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C. REPEAT TO THE OTHER SIDE.

Rear spring installation

1. Position the spring and shackle assembly.
2. Raise the axle.



E192161

NOTE: *Only tighten the nut and bolt to snug at this stage.*

3. Install the spring shackle-to-frame nut and bolt.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

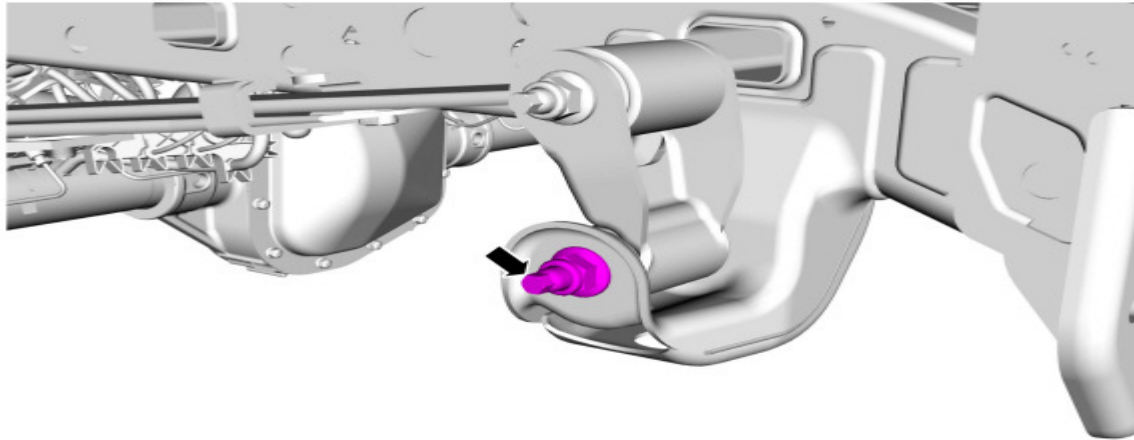
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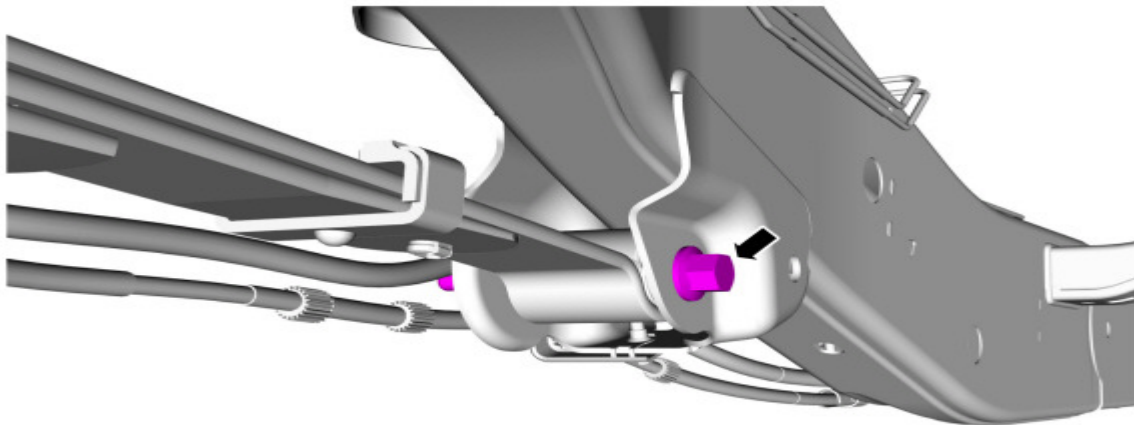


E192162

NOTE: *Only tighten the nut and bolt to snug at this stage.*

4. Install the spring-to-frame nut and bolt.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!



E192163

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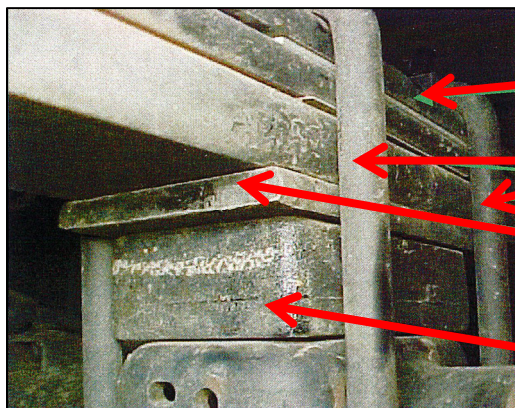


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Remove the factory-installed blocks (see image below). Block will not be re-used.



Leaf Springs

U-Bolts

.350" Spacer,
remains installed.

Block to remove.

Some vehicles are equipped with a .350" thick spacer between the leaf springs and block (see above). This spacer is NOT to be removed for this installation. Removing this spacer may allow the rear of the vehicle to drop lower than intended by this kit.

Install supplied "wedges" between axle and .350" spacer, in place of the factory blocks that were removed. **Thicker end of the wedge is installed towards the rear of the vehicle.**

5.

1. **NOTE:** *Verify U-bolts are perpendicular and on center to leaf spring. Maintain equal side-to-side clearance to leaf spring stack when securing.*

Install the 2 new U-bolts.

2. Install the U-bolt plate.

3. **NOTE:** *Only tighten the nut and bolt to snug at this stage.*

4. Install the 4 new U-bolt nuts.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

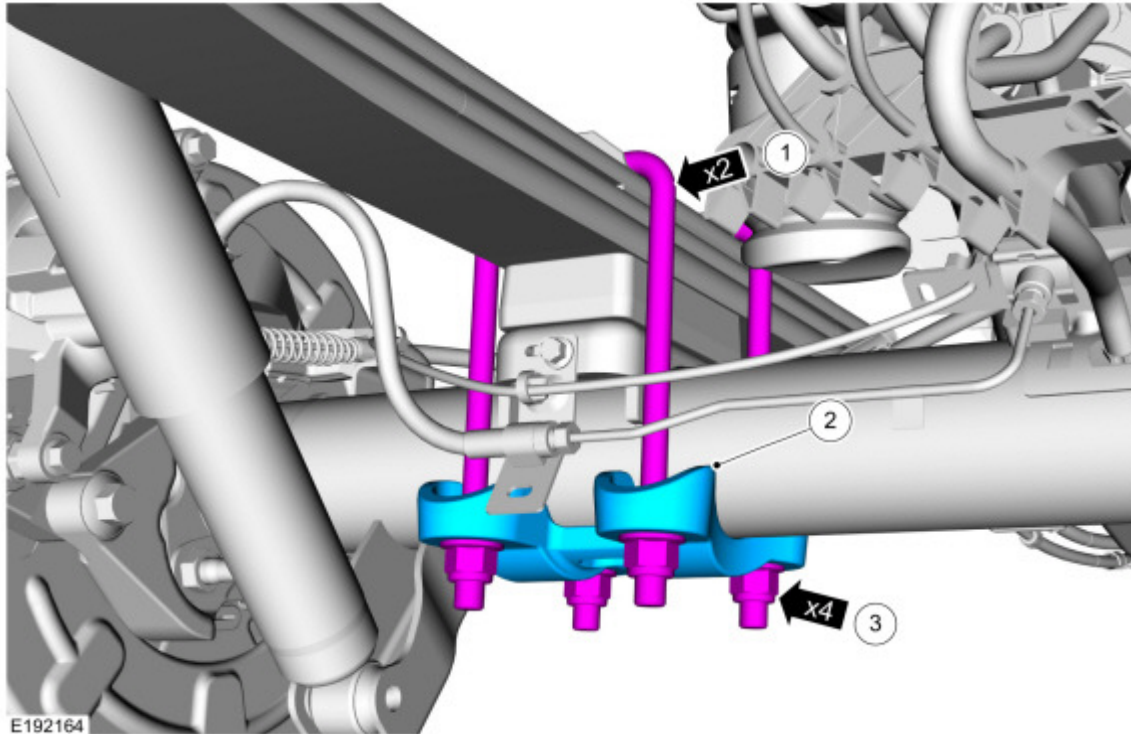
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NOTE: *Only tighten the nut and bolt to snug at this stage.*

6. Install the rear shock absorber lower nut and bolt.

NOTE: DURING SUSPENSION RE-ASSEMBLY, APPLY BLUE THREAD LOCKING COMPOUND TO ALL FASTENERS!

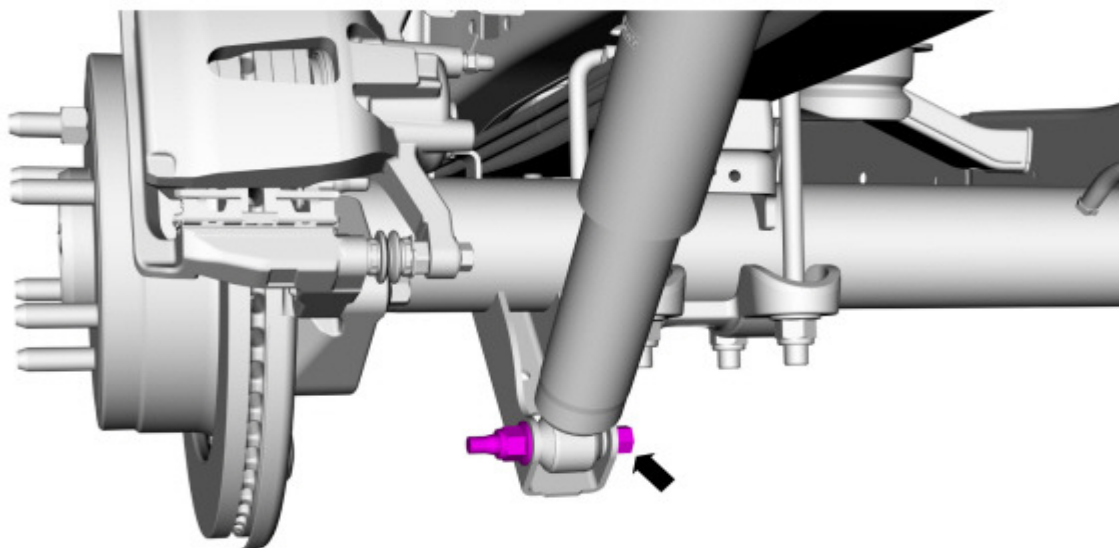
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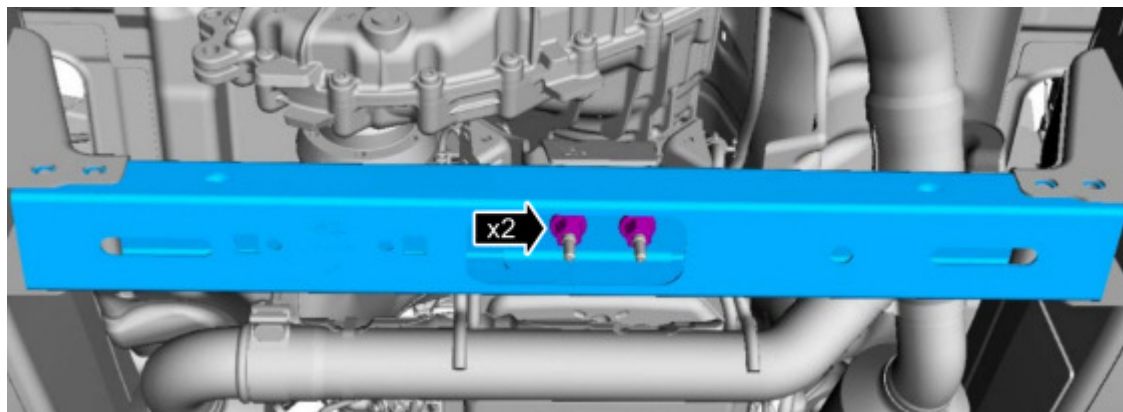
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E192165

Transmission spacer installation

Locate the two transmission mounting nuts. Remove nuts.



Raise transmission approx.. 5/16" Slide the spacer over studs between the mount and crossmember. Lower transmission. Center transmission on crossmember and torque nuts to 76lb.-ft.

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Install the muffler.

Muffler Installation

1. To install, reverse removal procedure.
2. Check the exhaust system for leaks.

Raise the fuel tank.

Fuel Tank Installation

To install, reverse the removal procedure.

7. Install the wheel and tire.

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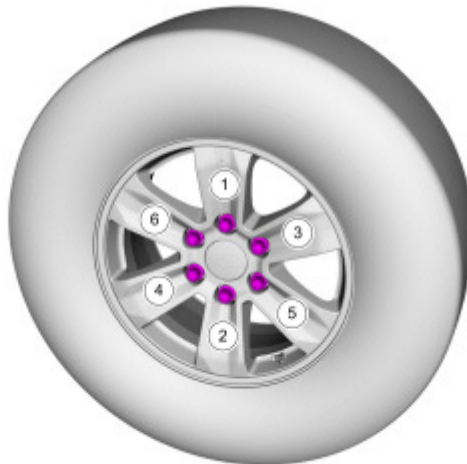
⚠ WARNING: Retighten wheel nuts within 160 km (100 mi) after a wheel is reinstalled. Wheels can loosen after initial tightening. Failure to follow this instruction may result in serious injury to vehicle occupant(s).

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.*

Tighten the wheel nuts
Torque: 150 lb.ft (204 Nm)



E190252

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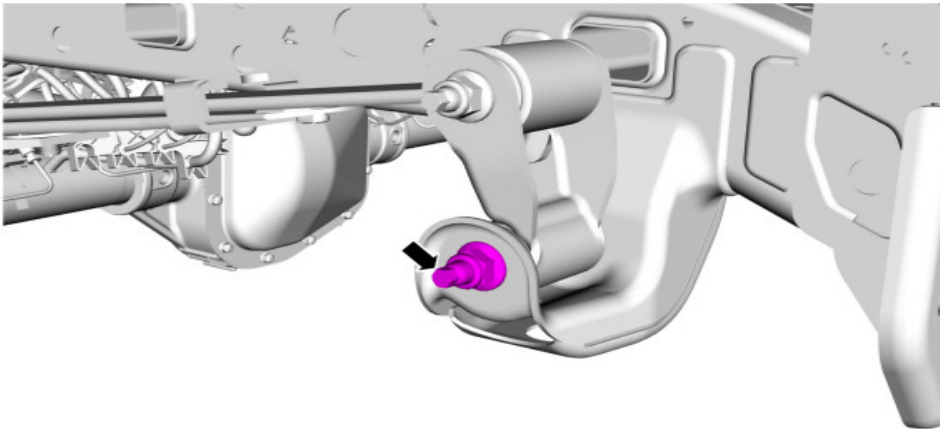
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8. Lower the vehicle until the weight of the vehicle is resting on the wheels and tires (curb height).

9. Tighten the spring shackle-to-frame nut and bolt.

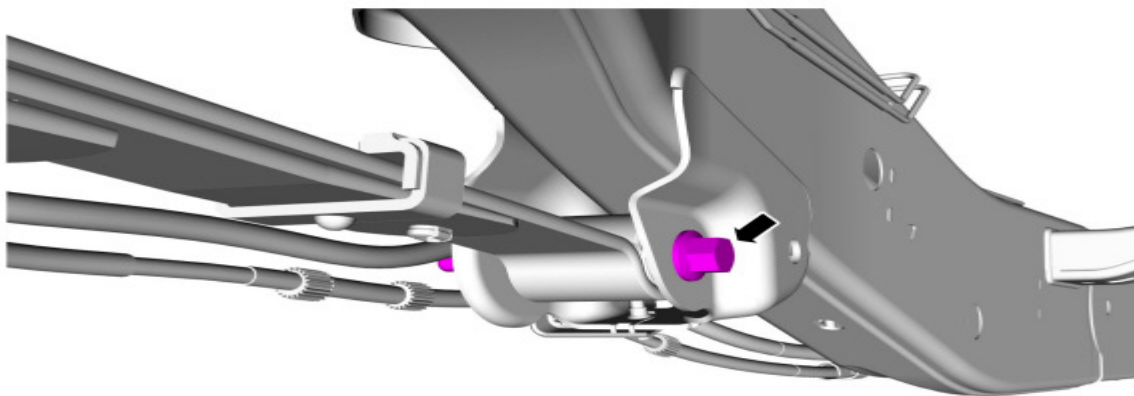
Torque: 173 lb.ft (235 Nm)



E192162

10. Tighten the spring-to-frame nut and bolt.

Torque: 258 lb.ft (350 Nm)



E192163

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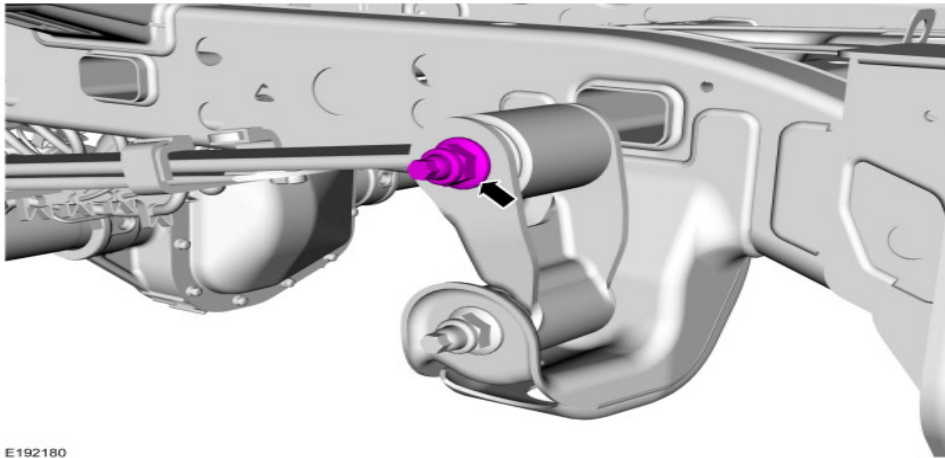
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11. Tighten the shackle-to-spring bolt and nut.

Torque: 173 lb.ft (235 Nm)



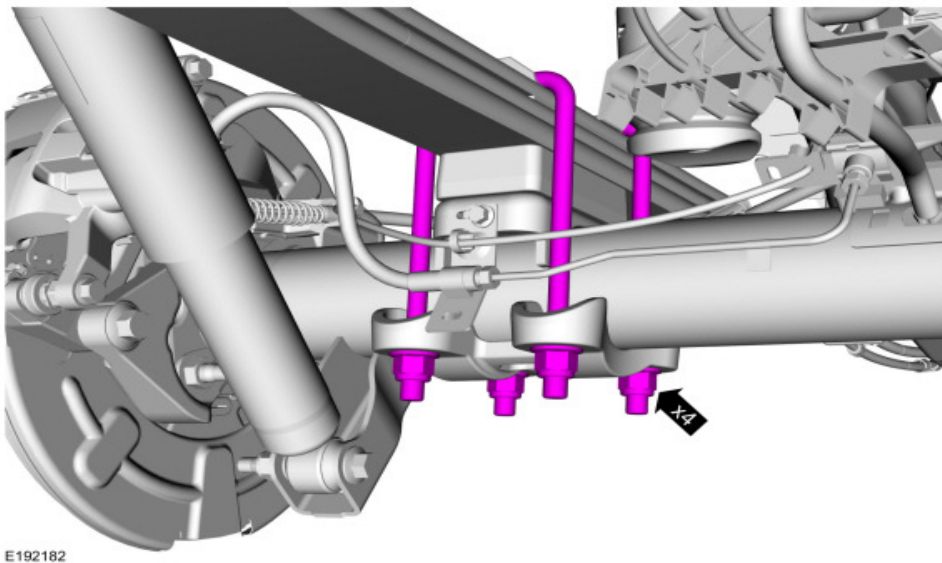
12. Tighten the U-bolt nuts in a cross pattern in 4 stages.

Torque:

Stage 1: 26 lb.ft (35 Nm)

Stage 2: 52 lb.ft (70 Nm)

Stage 3: 70 lb.ft (100 Nm)



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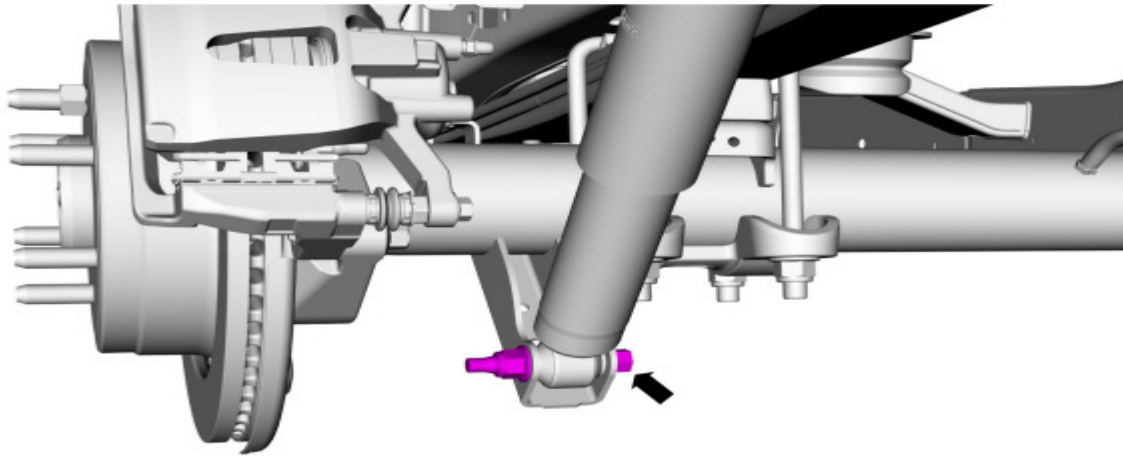
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13. Tighten the rear shock absorber lower nut and bolt.

Torque: 66 lb.ft (90 Nm)



E192165

14. CHECK THAT ALL INSTALLATION STEPS HAVE BEEN COMPLETED.

CHECK THE TORQUE OF ALL NUTS AND BOLTS AFFECTED BY THIS PROCEDURE.

RECHECK

ALL NUTS AND BOLTS FOR TIGHTNESS AFTER THE FIRST 300 MILES AND AT EVERY ROUTINE SERVICE INSPECTION.

15. MAKE SURE TO INSTALL THE SUPPLIED WARNING DECAL FOLLOWING THE INSTRUCTIONS

INCLUDED WITH THE WARNING INFORMATION SHEET.

RECONNECT THE NEGATIVE BATTERY TERMINAL ON THE BATTERY.

16. MAKE SURE TO KEEP THESE INSTRUCTIONS WITH THE VEHICLE.

17. CHECK FRONT END ALIGNMENT

18. READJUST THE HEADLIGHTS TO THE PROPER SETTINGS.

19. ROAD TEST THE VEHICLE.

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