

Spring - F-450/F-550

Special Tool(s) / General Equipment

Vehicle/Axle Stands

Removal

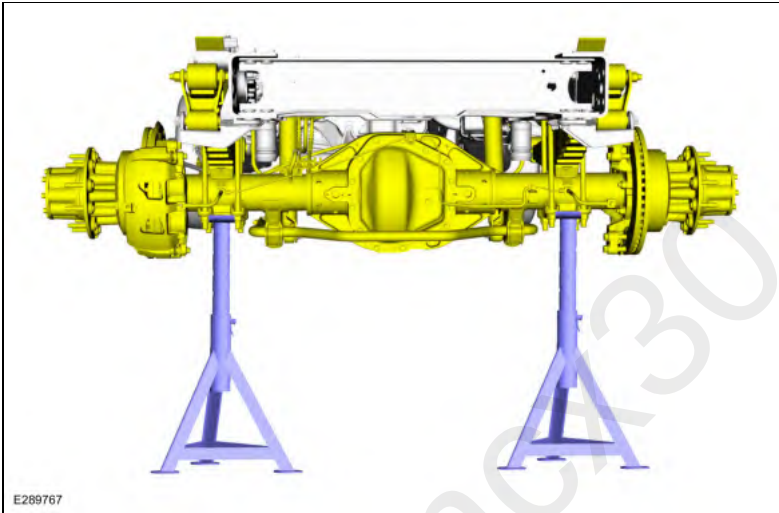
NOTICE: Suspension fasteners are critical parts that affect the performance of vital components and systems. Failure of these fasteners may result in major service expense. Use the same or equivalent parts if replacement is necessary. Do not use a replacement part of lesser quality or substitute design.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

- 1. Remove the wheel and tire.
Refer to: Wheel and Tire - Vehicles With: Single Rear Wheels (204-04A Wheels and Tires, Removal and Installation).
Refer to: Wheel and Tire - Vehicles With: Dual Rear Wheels (204-04A Wheels and Tires, Removal and Installation).

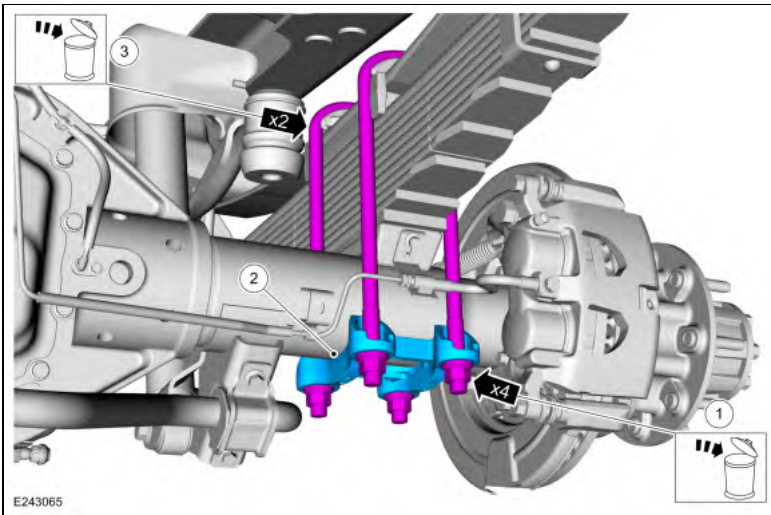
- 2. **NOTE:** Vehicles equipped with midship fuel tank.

For the LH spring, lower the fuel tank to gain access to the spring-to-frame bolt.
Refer to: Fuel Tank - Vehicles With: Midship Fuel Tank (310-01A Fuel Tank and Lines - 6.2L V8, Removal and Installation).
Refer to: Fuel Tank - Vehicles With: Midship Fuel Tank (310-01B Fuel Tank and Lines - 6.7L Power Stroke Diesel, Removal and Installation).

- 3. Support the rear axle assembly.
Use the General Equipment: Vehicle/Axle Stands

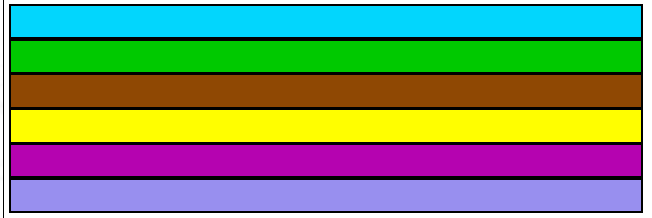
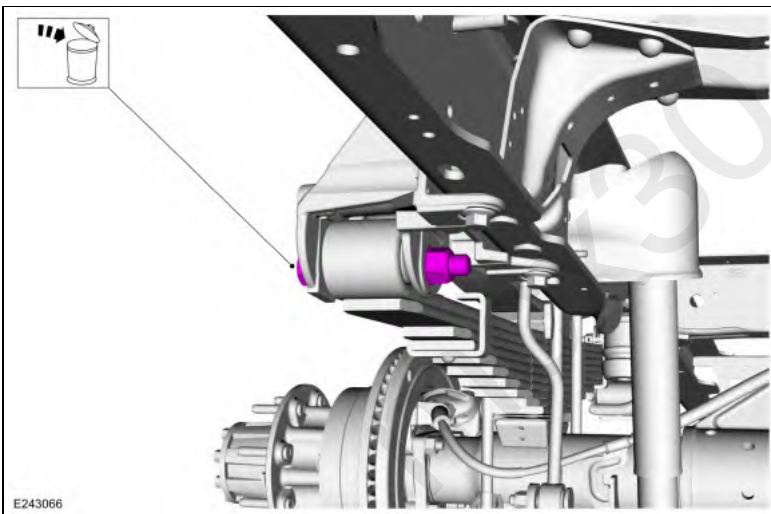


- 4.
 - 1. Remove and discard the U-bolt nuts.
 - 2. Remove the U-bolt plate.
 - 3. Remove and discard the U-bolts.

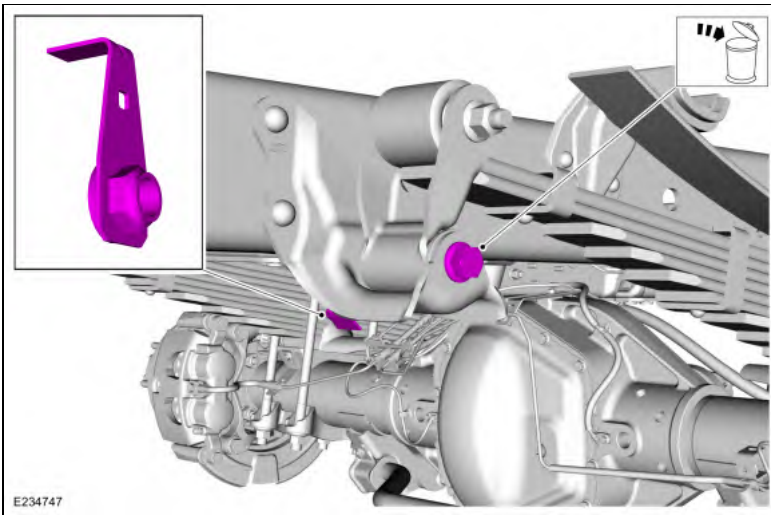


5. **NOTE:** If the clevis hole in the spring bracket is elongated to 0.98 in (25 mm) or more the spring bracket must be replaced.

Remove and discard the spring-to-frame bracket nut and bolt.

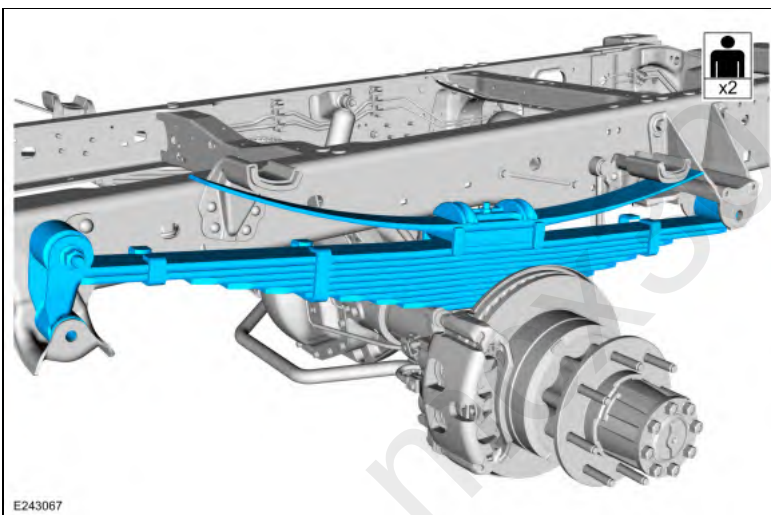


6. Remove and discard the spring shackle-to-frame bolt and flagnut.

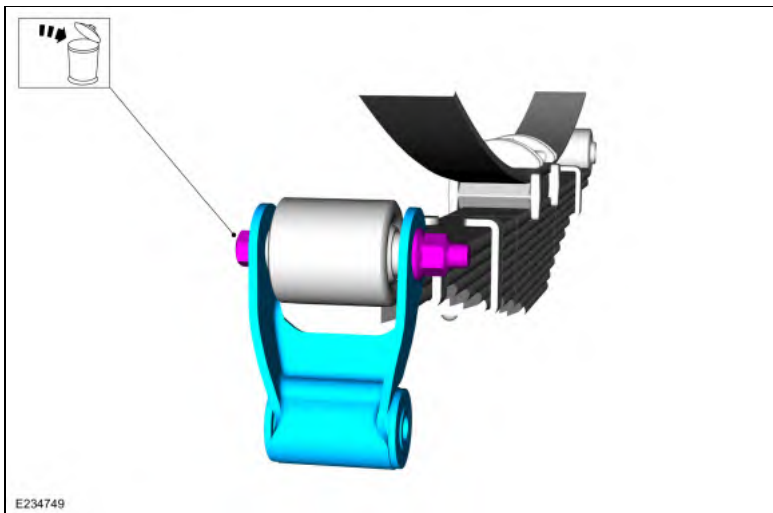


7. **NOTE:** This step requires the aid of another technician.

Remove the rear spring assembly.



8. If necessary.
Remove and discard the spring-to-shackle bolt and nut and remove the spring shackle.

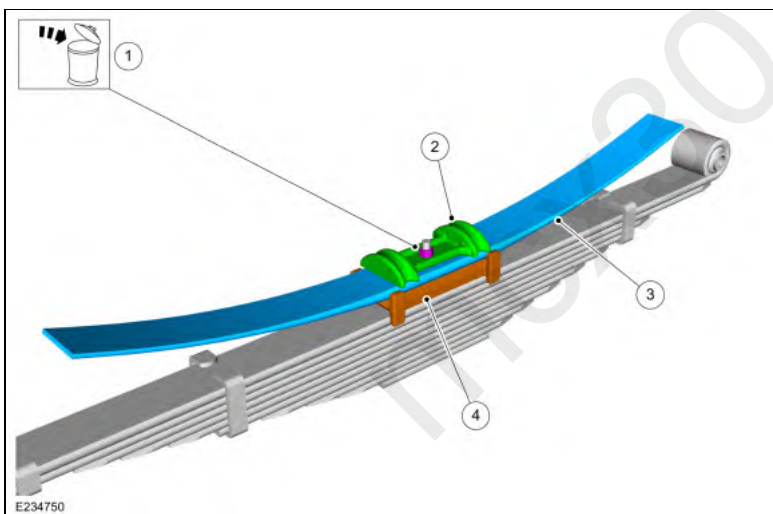




9. If necessary.

Remove the auxiliary spring.

1. Remove and discard the auxiliary spring nut.
2. Remove the upper spring plate.
3. Remove the auxiliary spring.
4. Remove the auxiliary spring spacer.





Installation

1. If necessary.

Install the auxiliary spring.

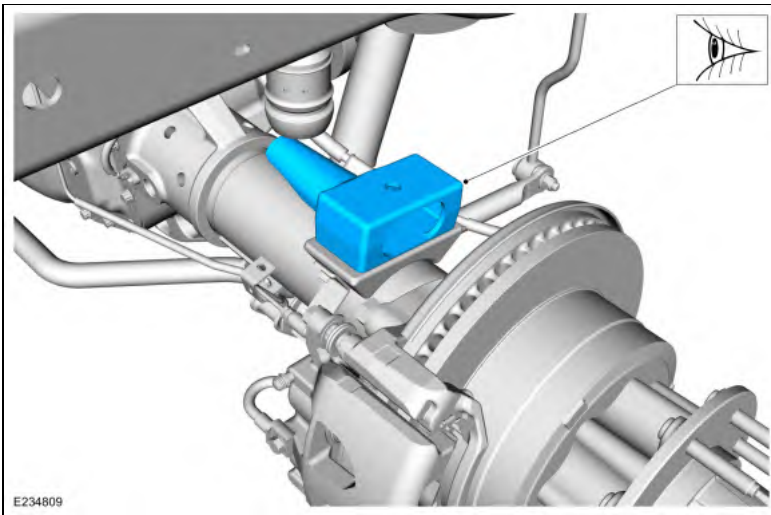
1. Position the auxiliary spring spacer.
 2. Position the auxiliary spring.
 3. Position the upper spring plate.
 4. Install the new auxiliary spring nut.
- Torque: 74 lb.ft (100 Nm)*



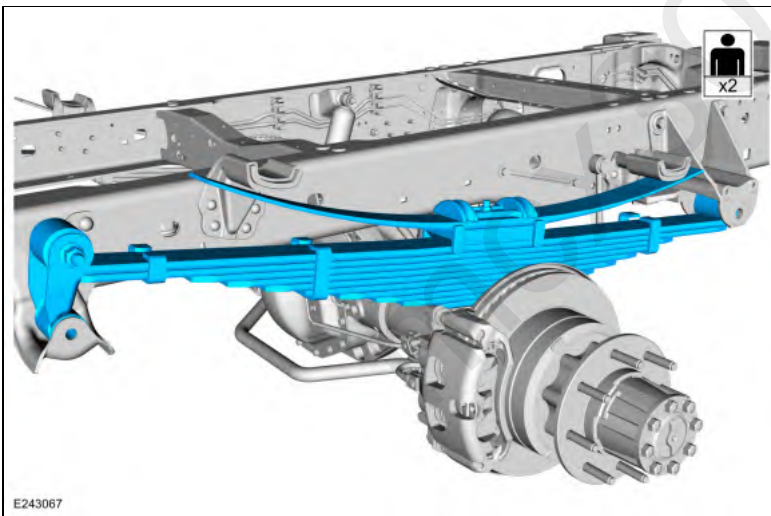
- Position the rear spring shackle onto the spring and install the new spring-to-shackle nut and bolt.



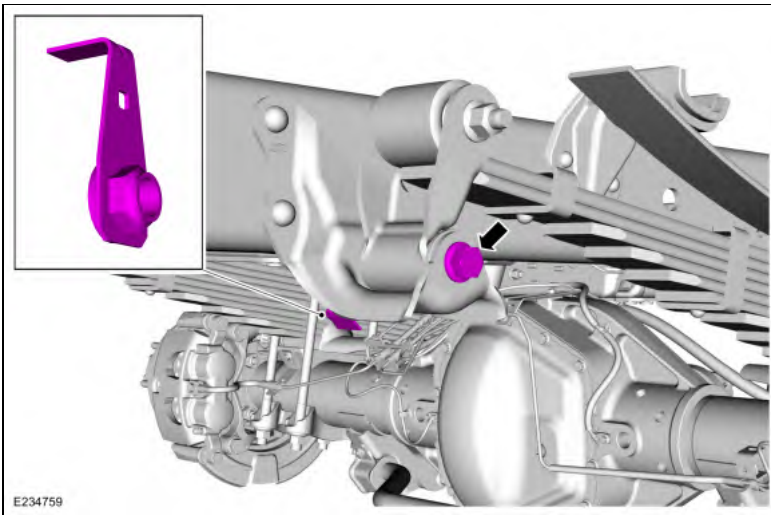
3. If equipped.
Make sure that the spring spacer is properly positioned.



4. **NOTE:** *This step requires the aid of another technician.*
Position the rear spring assembly.



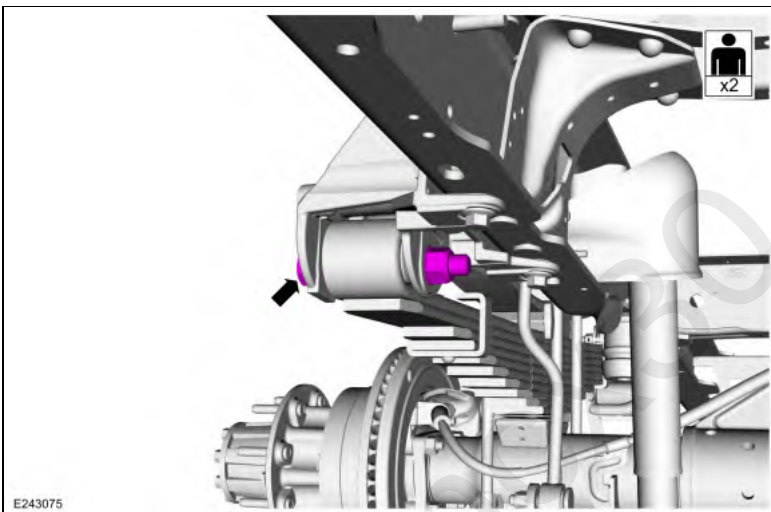
5. **NOTE:** *Only tighten the nut and bolt finger tight at this stage.*
Install the new spring shackle-to-frame bolt and flagnut.



6. **NOTE:** This step requires the aid of another technician.

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

Install the new spring-to-frame bracket nut and bolt.



7.

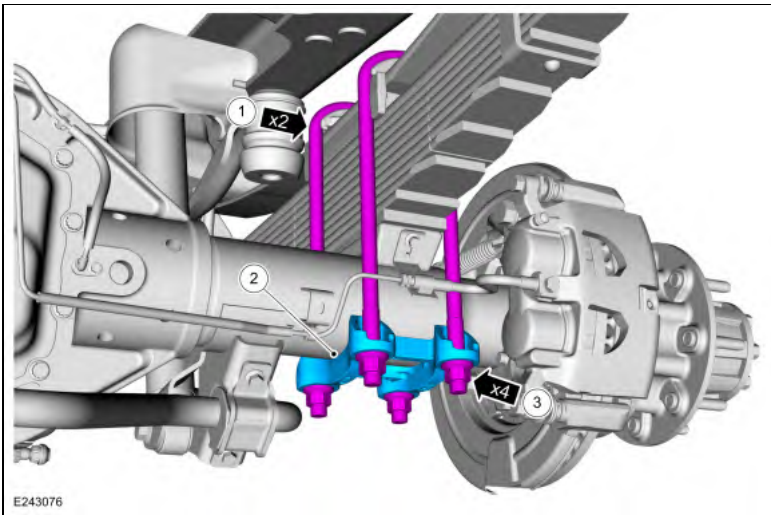
1. **NOTE:** Verify U-bolts are perpendicular and on center to leaf spring. Maintain equal side-to-side clearance to leaf spring stack when securing.

Install the new U-bolts.

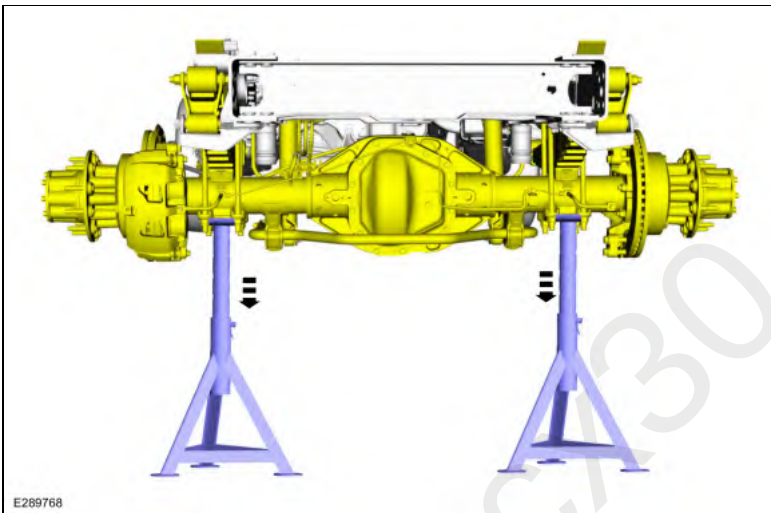
2. Install the U-bolt plate.

3. **NOTE:** Only tighten the nuts finger tight at this stage.

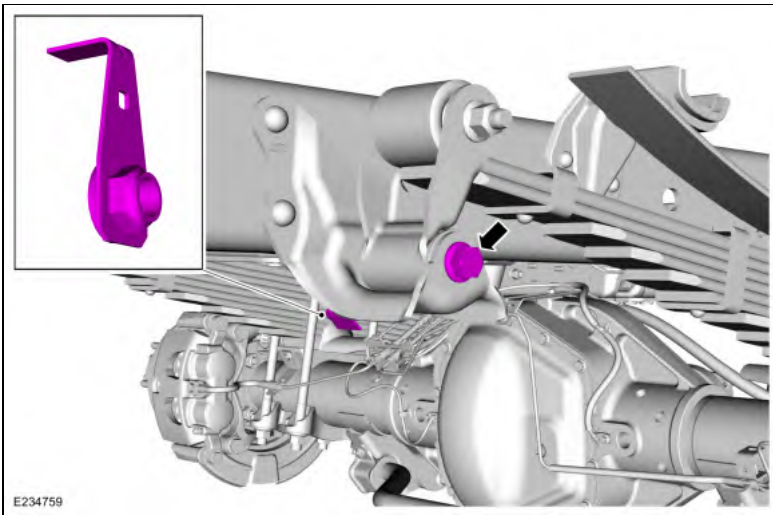
Install the new U-bolt nuts.



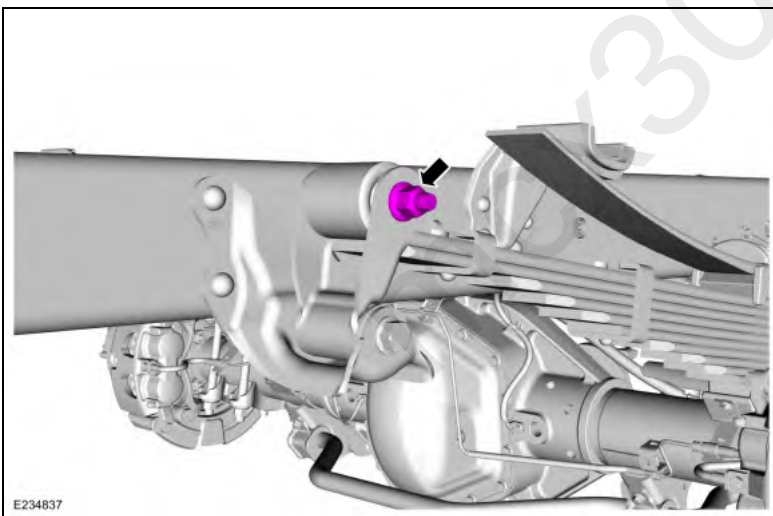
- Lower the vehicle onto jack stand to compress the springs before tightening the retainers (curb height).
Use the General Equipment: Vehicle/Axle Stands



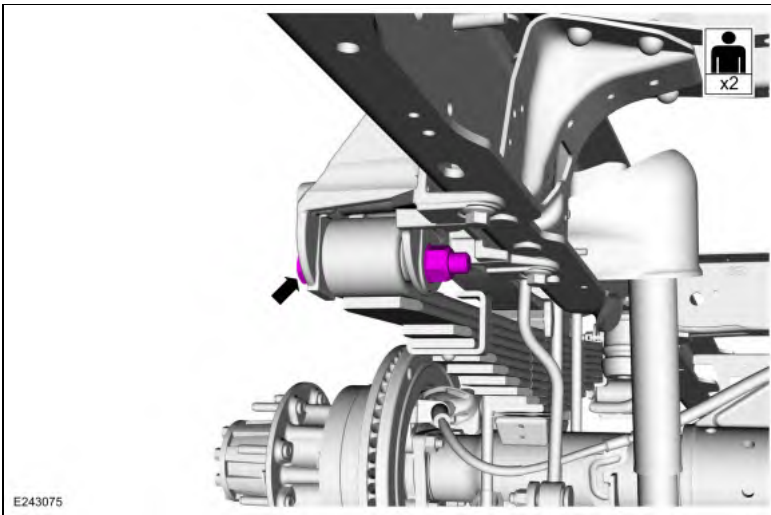
- Tighten the new spring shackle-to-frame bolt.
Torque: 173 lb.ft (235 Nm)



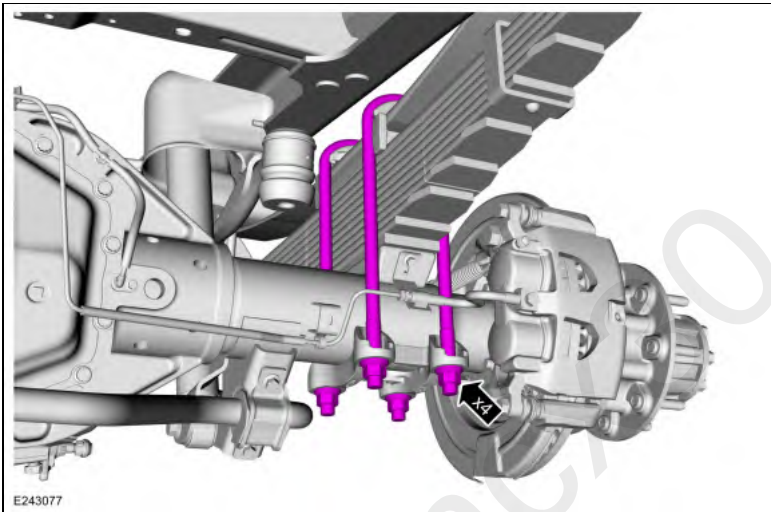
10. If necessary,
Tighten the new spring-to-shackle nut.
Torque: 173 lb.ft (235 Nm)



11. **NOTE:** This step requires the aid of another technician.
Tighten the new spring-to-frame nut.
Torque: 325 lb.ft (440 Nm)



12. Tighten the new U-bolt nuts in a cross pattern in 4 stages.
- Torque:*
- Stage 1: 74 lb.ft (100 Nm)
 - Stage 2: 148 lb.ft (200 Nm)
 - Stage 3: 221 lb.ft (300 Nm)
 - Stage 4: 295 lb.ft (400 Nm)



13. **NOTE:** *Vehicles equipped with midship fuel tank.*
- For the LH spring, raise the fuel tank.
- Refer to: Fuel Tank - Vehicles With: Midship Fuel Tank (310-01A Fuel Tank and Lines - 6.2L V8, Removal and Installation).
- Refer to: Fuel Tank - Vehicles With: Midship Fuel Tank (310-01B Fuel Tank and Lines - 6.7L Power Stroke Diesel, Removal and Installation).
14. Install the wheel and tire.
- Refer to: Wheel and Tire - Vehicles With: Single Rear Wheels (204-04A Wheels and Tires, Removal and Installation).
- Refer to: Wheel and Tire - Vehicles With: Dual Rear Wheels (204-04A Wheels and Tires, Removal and Installation).