

Tie Rod

Special Tool(s) / General Equipment

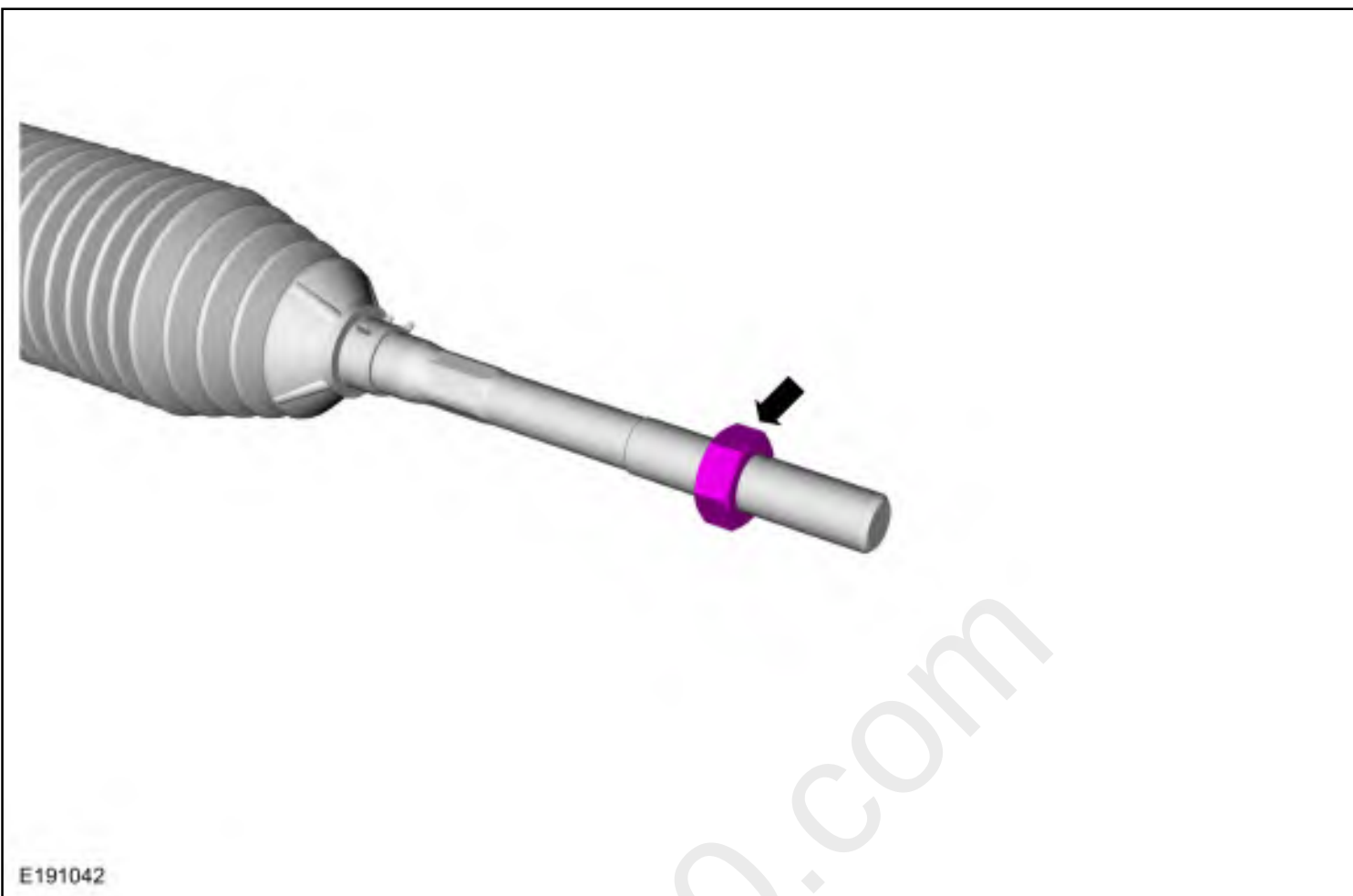
Boot Clamp Pliers

Materials

Name	Specification
Motorcraft® Premium Long-Life Grease XG-1-E1	ESA-M1C75-B

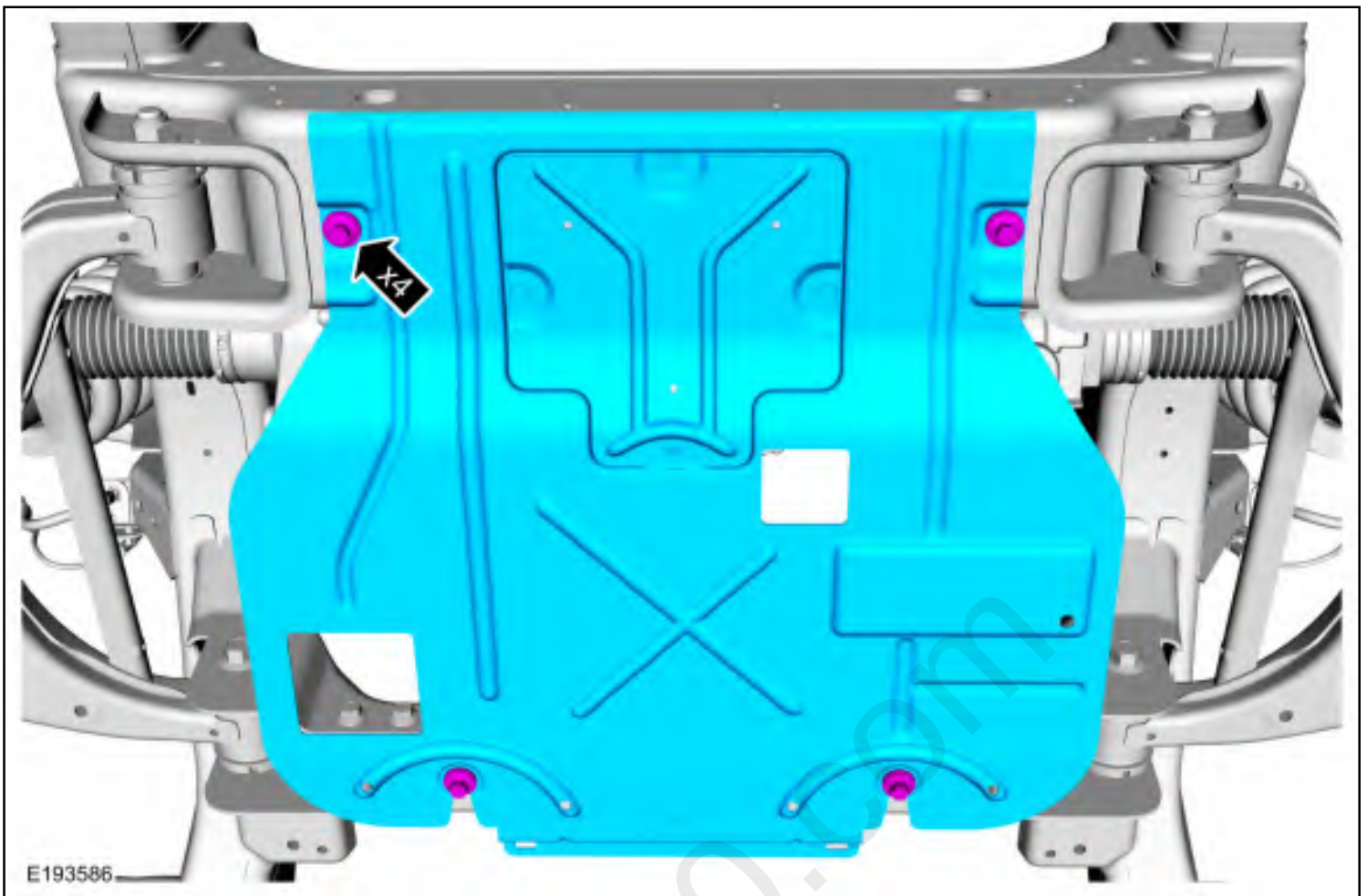
Removal

1. Remove the tie rod end.
Refer to: [Tie Rod End](#) (211-02 Power Steering, Removal and Installation).
2. Remove the tie rod end jamb nut.



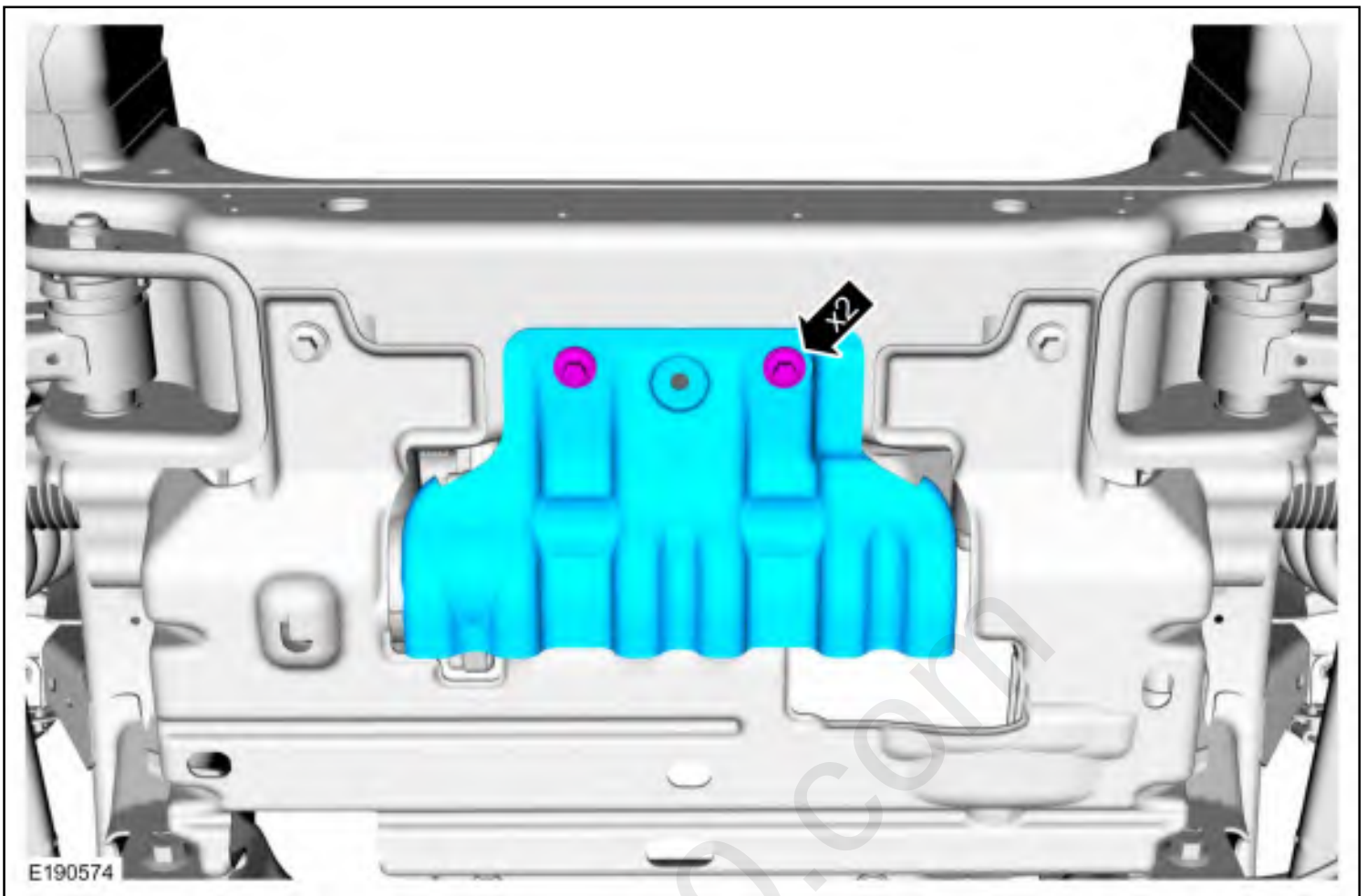
3. **NOTE:** *If equipped.*

Remove the 4 underbody shield bolts and remove the underbody shield.



4. **NOTE:** *If equipped.*

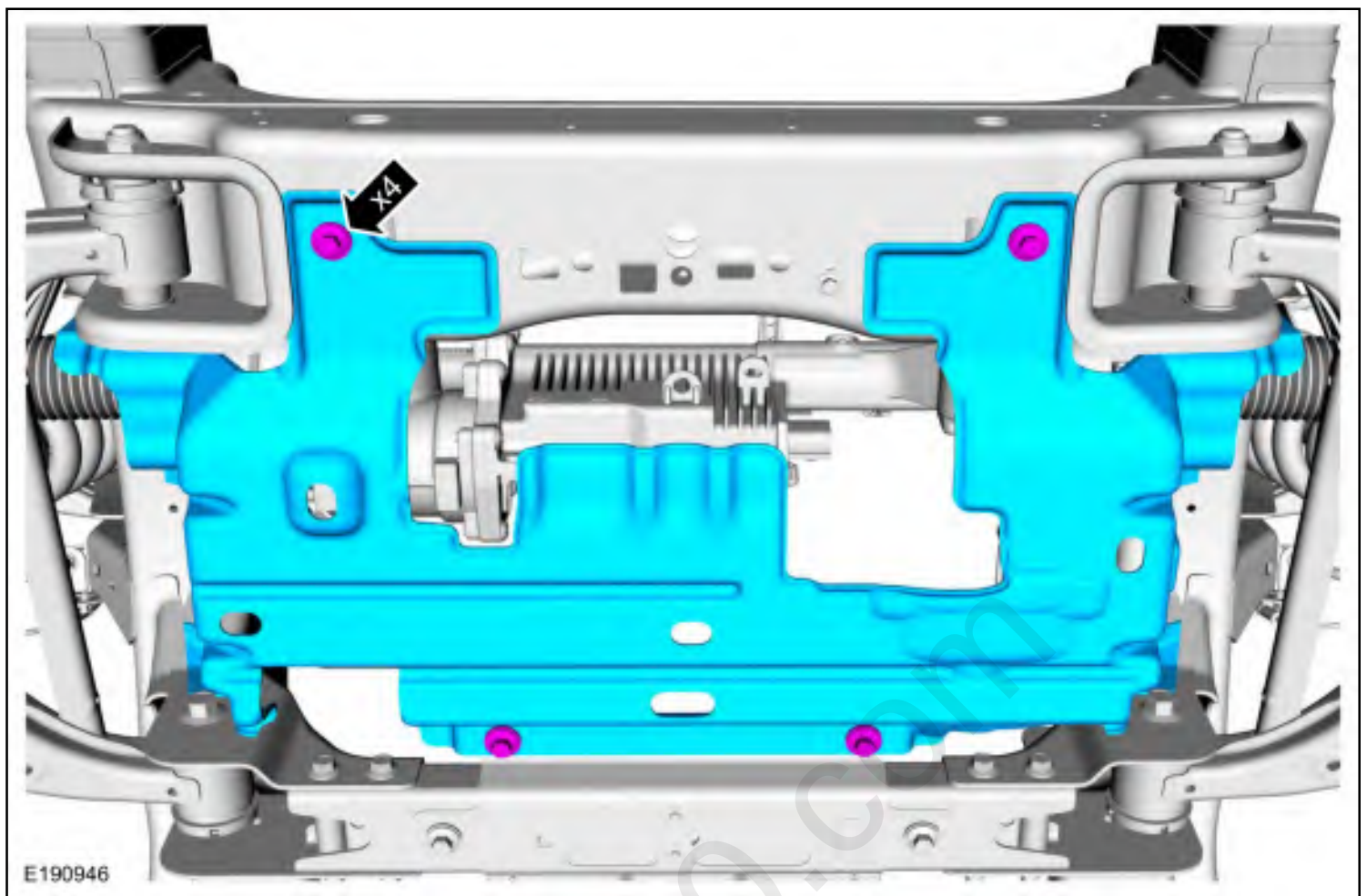
Remove the 2 underbody shield bolts and remove the underbody shield.



5. **NOTE:** *If equipped.*

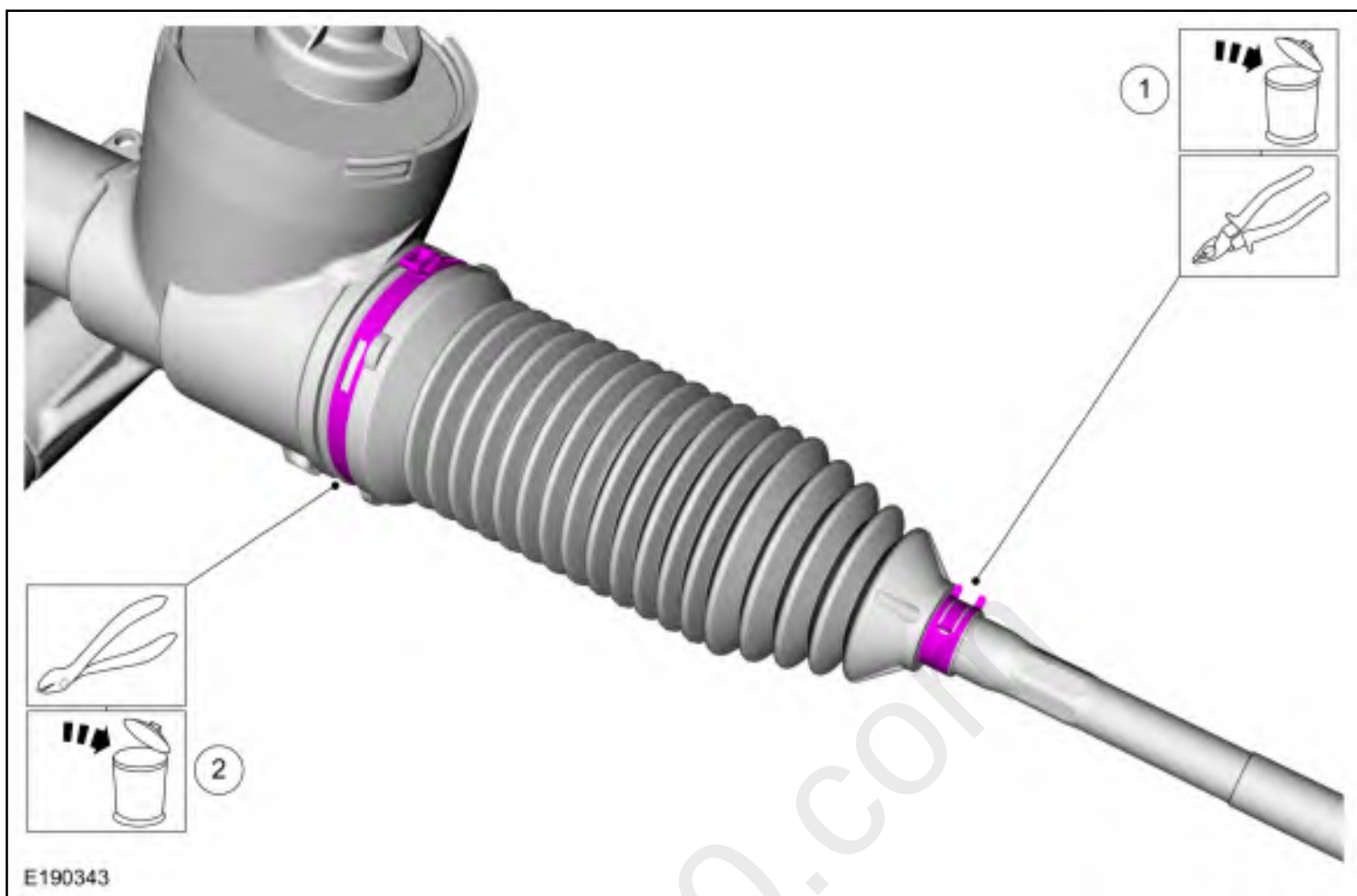
NOTE: *4WD shown, RWD similar.*

Remove the underbody shield bolts and the underbody shield.



6. **NOTE:** *If servicing the RH tie rod, both bellows boots must be removed.*

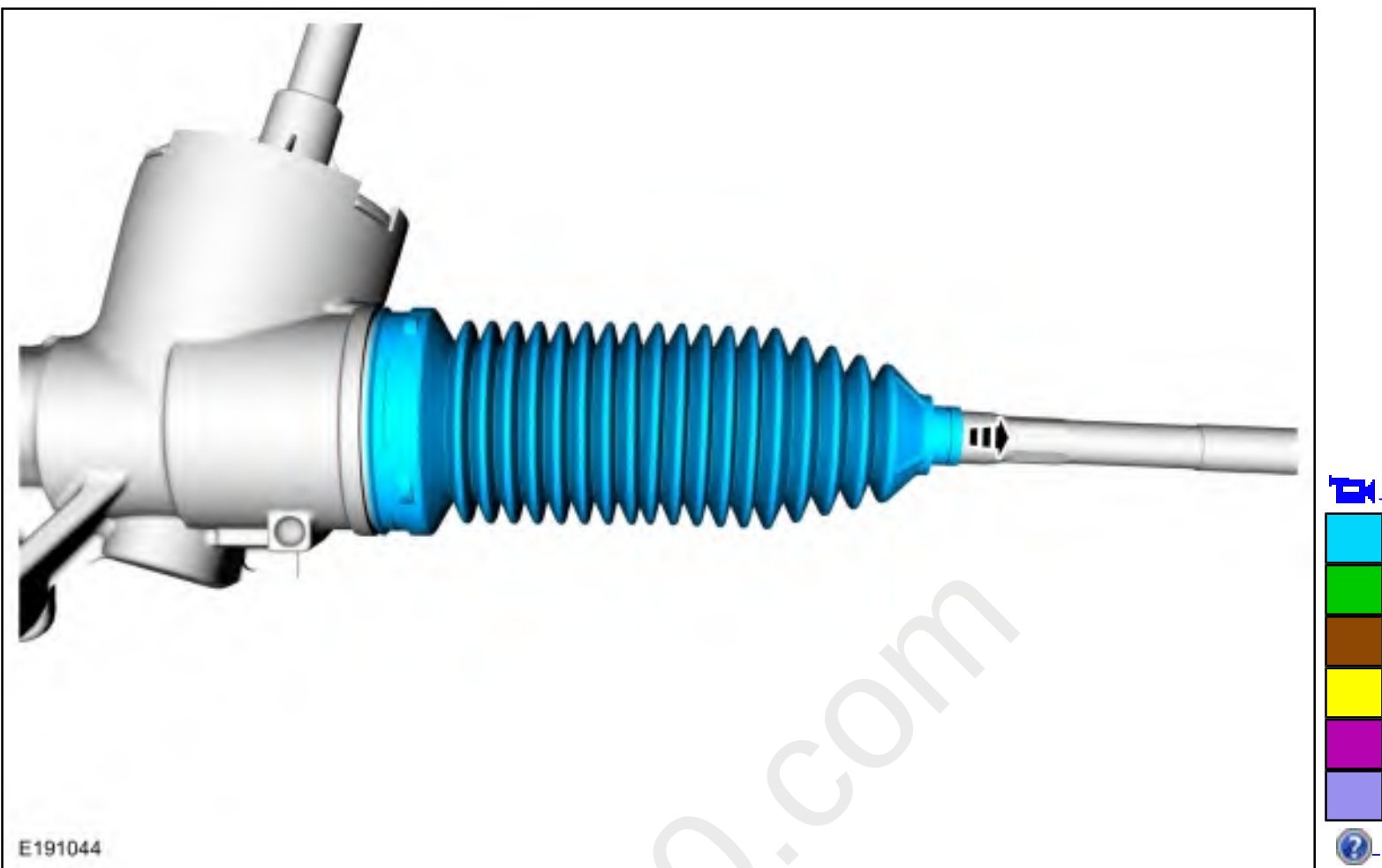
1. Remove and discard the inner bellows boot clamp.
2. Remove and discard the outer bellows boot clamp.



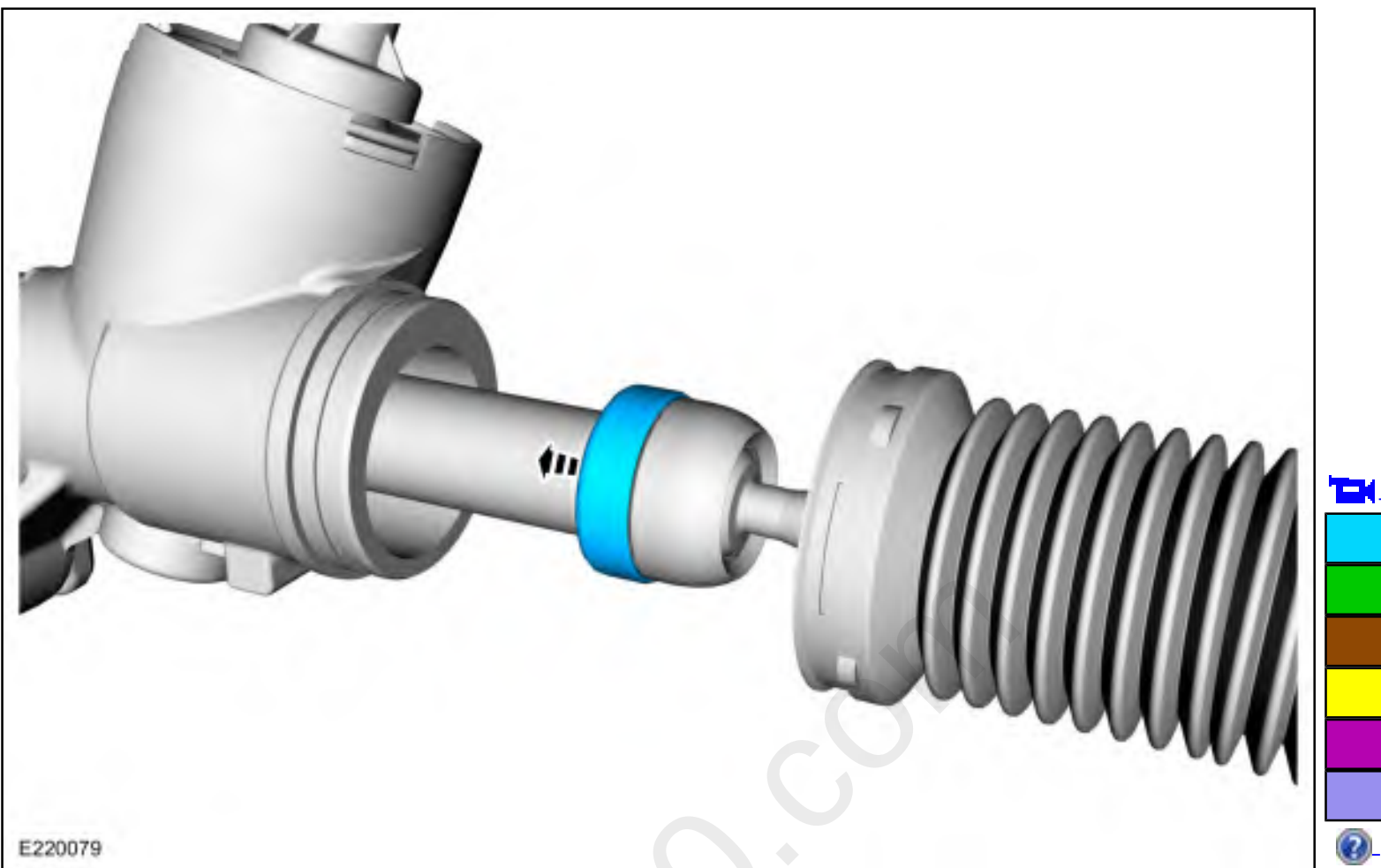
7. **NOTE:** *If servicing the RH tie rod, both bellows boots must be removed.*

NOTE: *Move the bellows boot enough to gain access to the inner tie rod nut.*

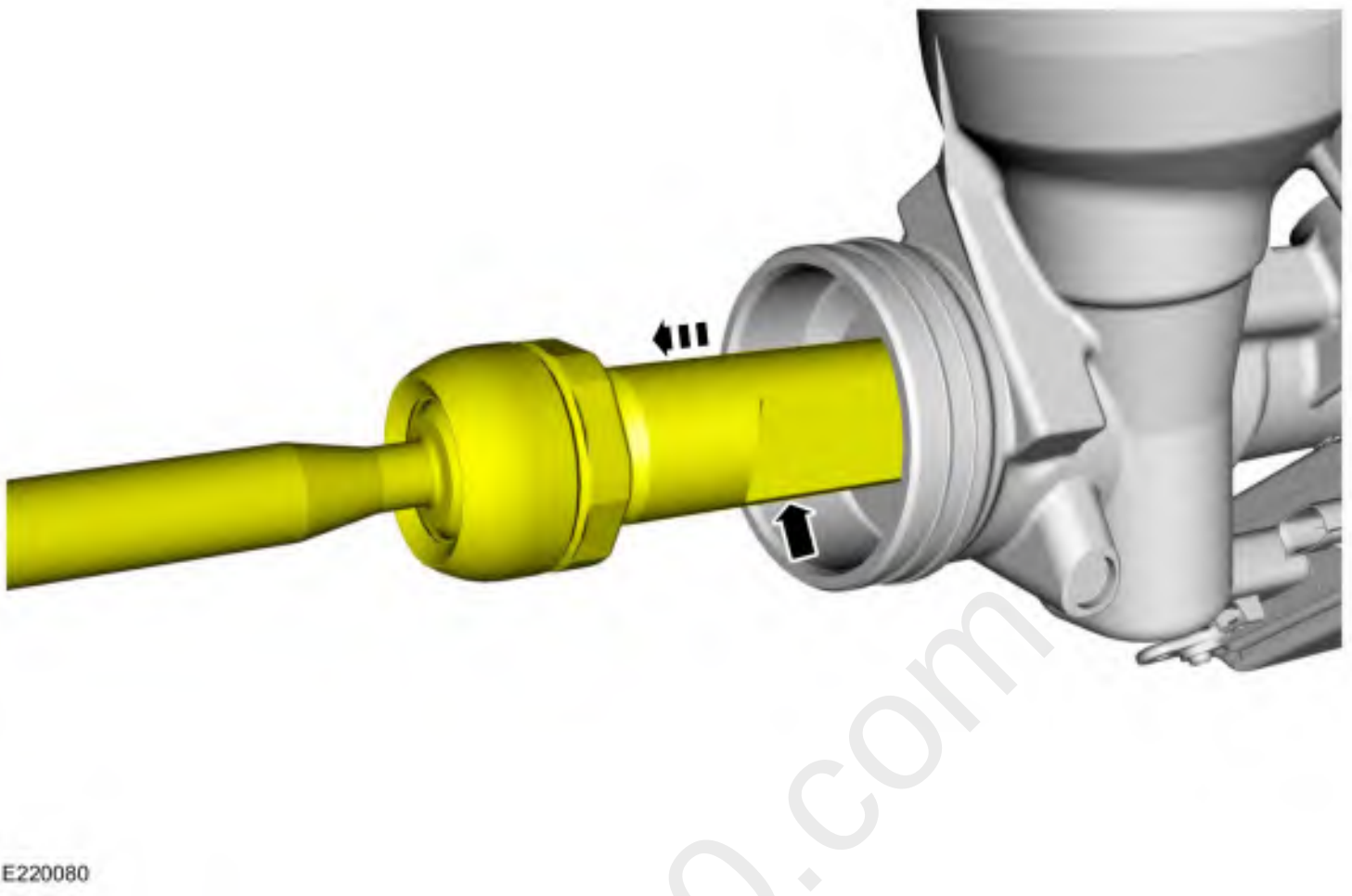
Position aside the bellows boot.



8. Position aside the steering stop.



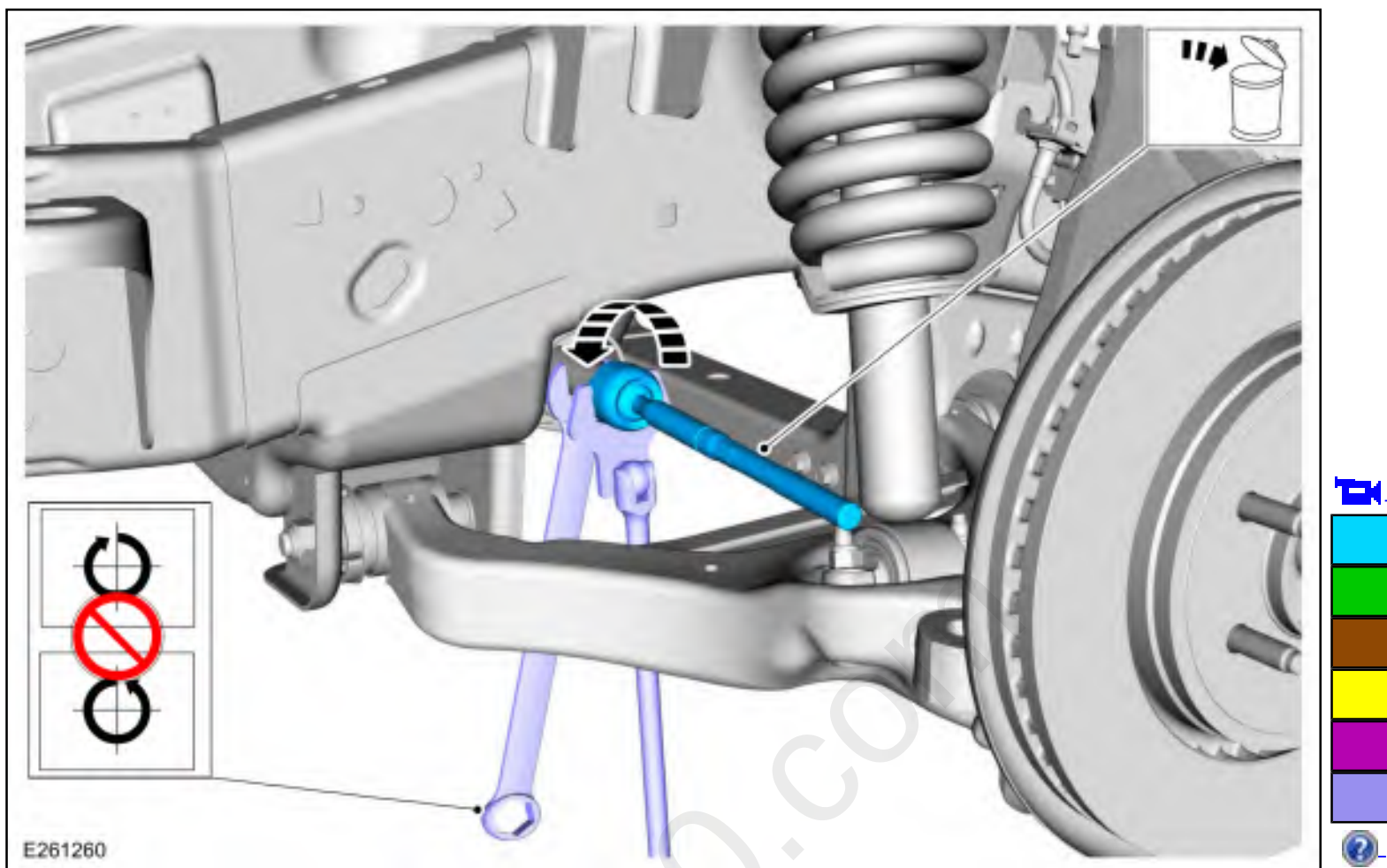
9. Position the steering rack far enough to the LH side to expose the flat surface.



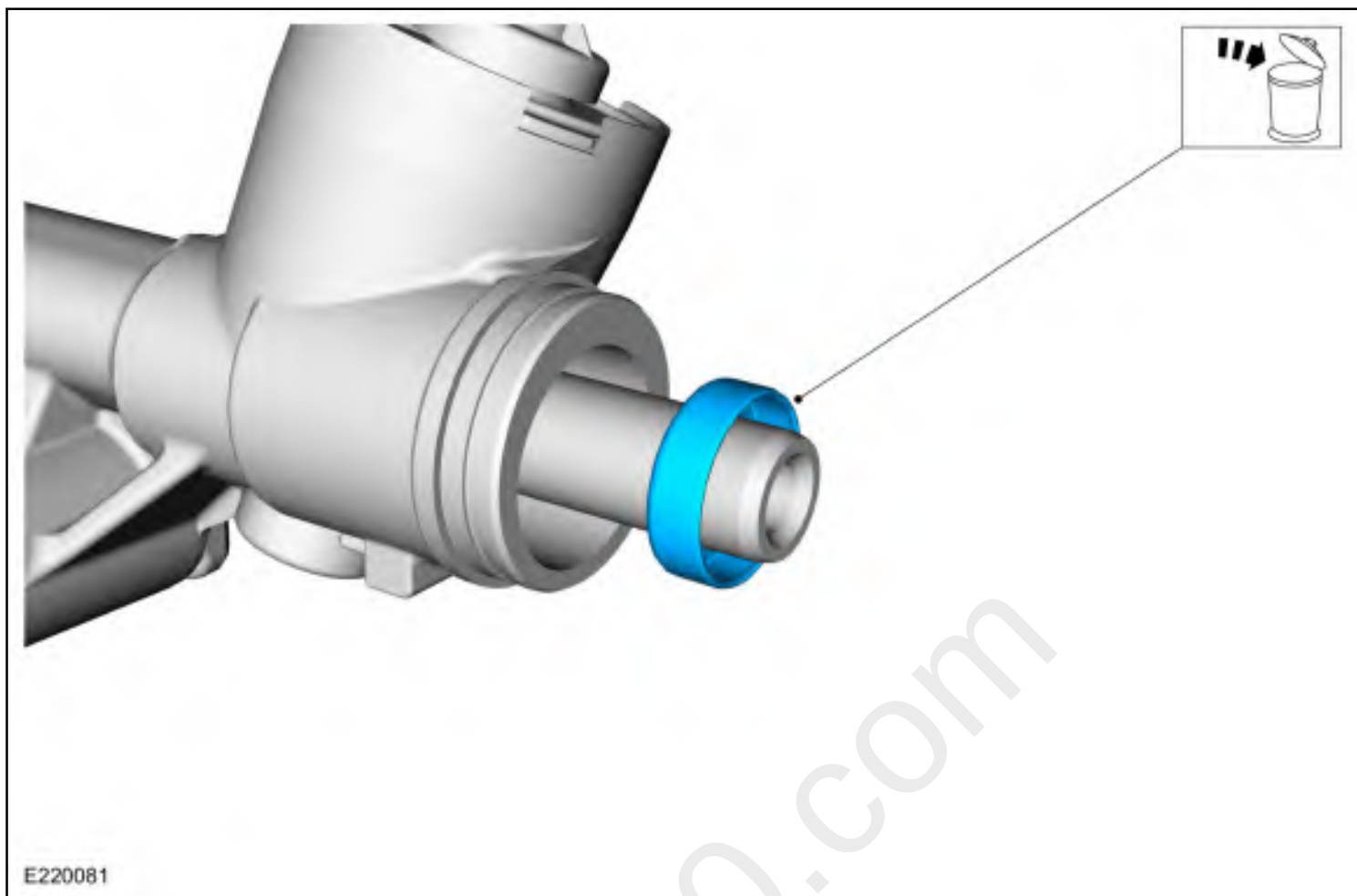
10. **NOTICE:** Place the steering gear at the center position and hold the steering gear rack while loosening the inner tie rod. Use an appropriate-sized wrench on the flat/teeth of the rack to resist rotation and to prevent damage during removal of the inner tie rod.

NOTE: *The steering gear rack can only be held on the LH side.*

Using an appropriate-sized wrench on the flat/teeth to hold the rack and an appropriate size crows foot wrench or open end wrench, remove and discard the inner tie rod.

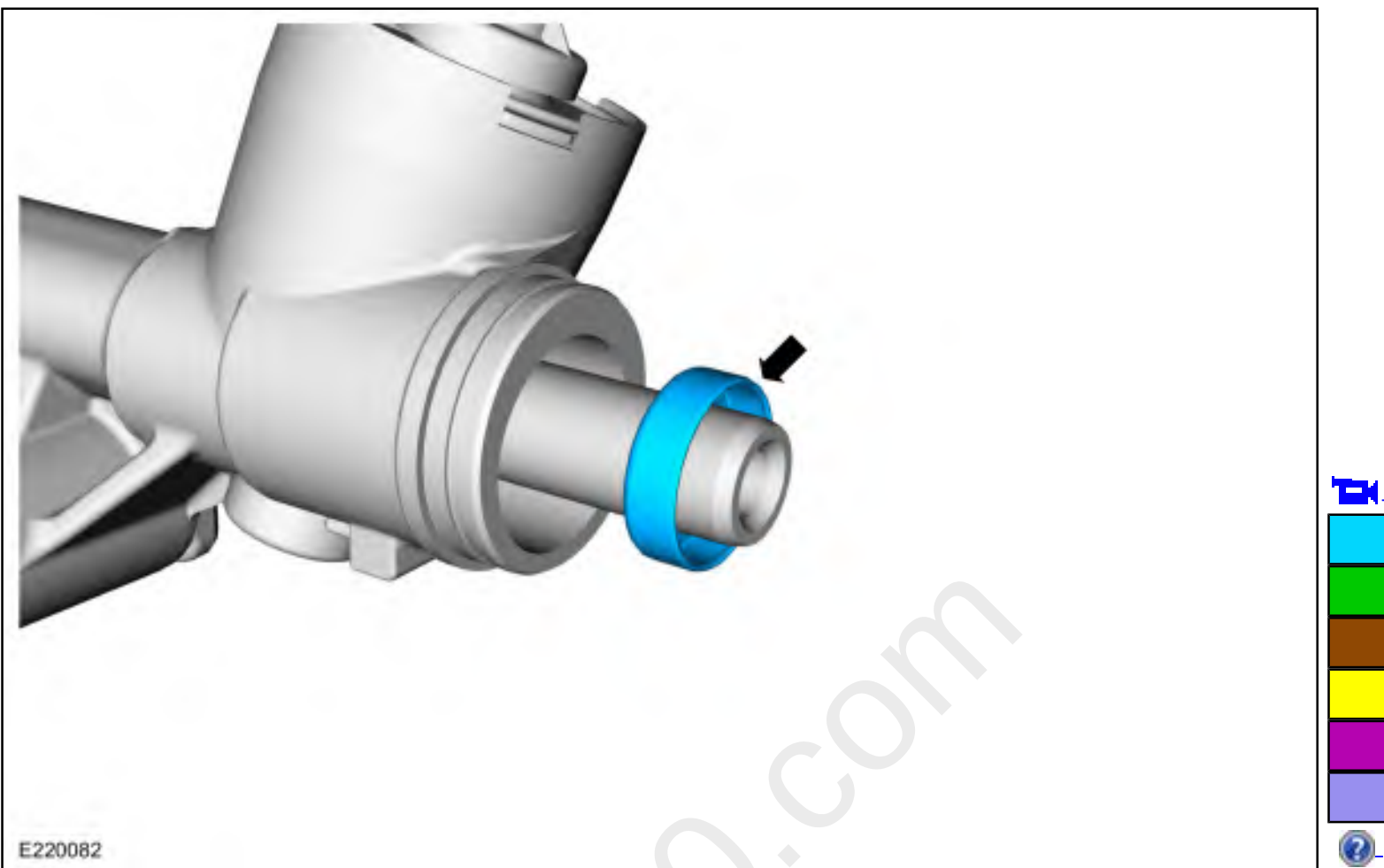


11. Remove and discard the steering stop.



Installation

1. Position the new steering stop.

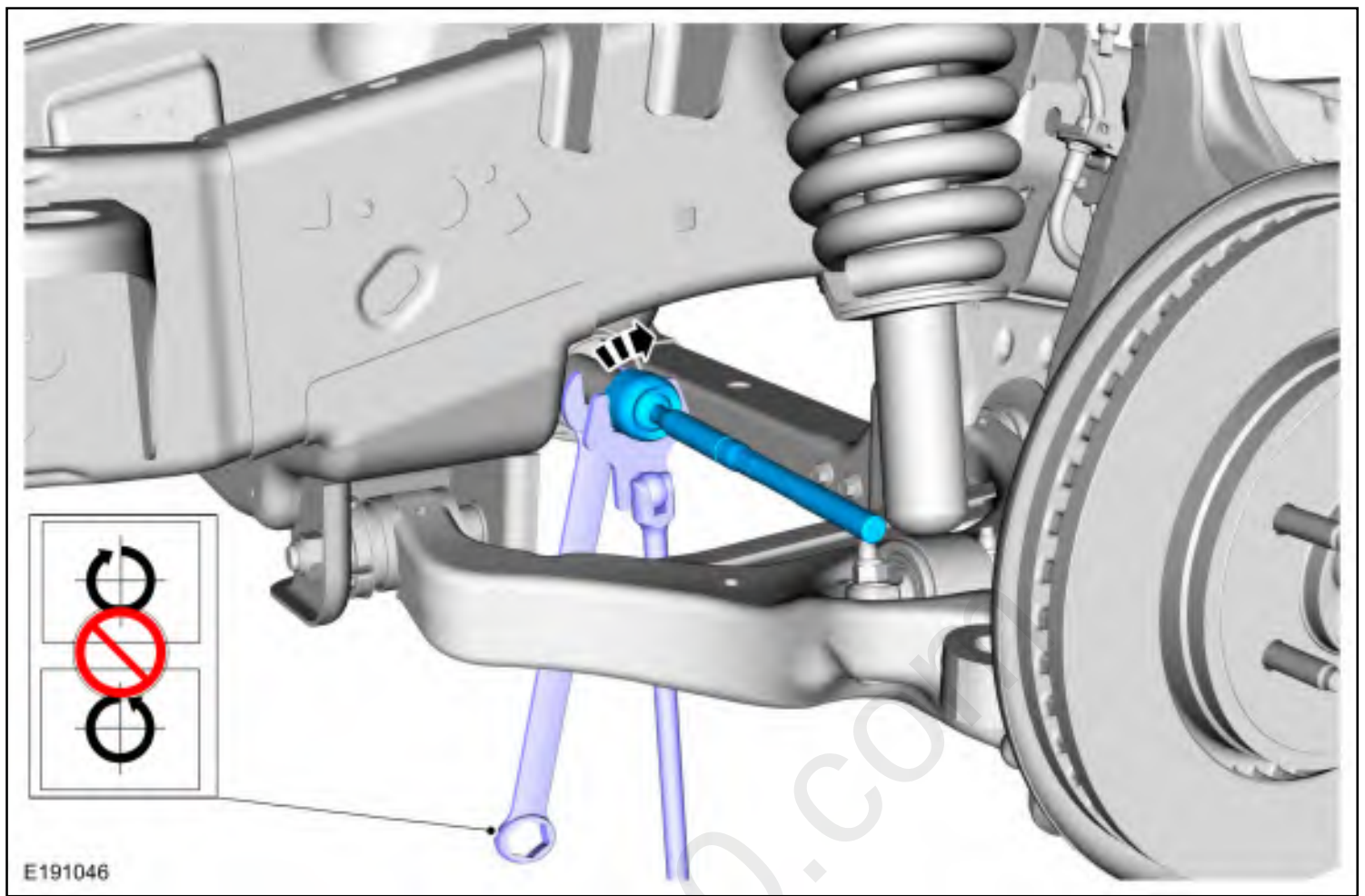


2. **NOTICE:** Place the steering gear at the center position and hold the steering gear rack while tightening the inner tie rod. Use an appropriate-sized wrench on the flat/teeth of the rack to resist rotation and to prevent damage during installation of the inner tie rod.

NOTE: *The help of an assistant may be necessary to torque the RH inner tie rod.*

Using an appropriate-sized wrench on the flat/teeth to hold the rack and an appropriate size crows foot wrench or open end wrench, install the inner tie rod.

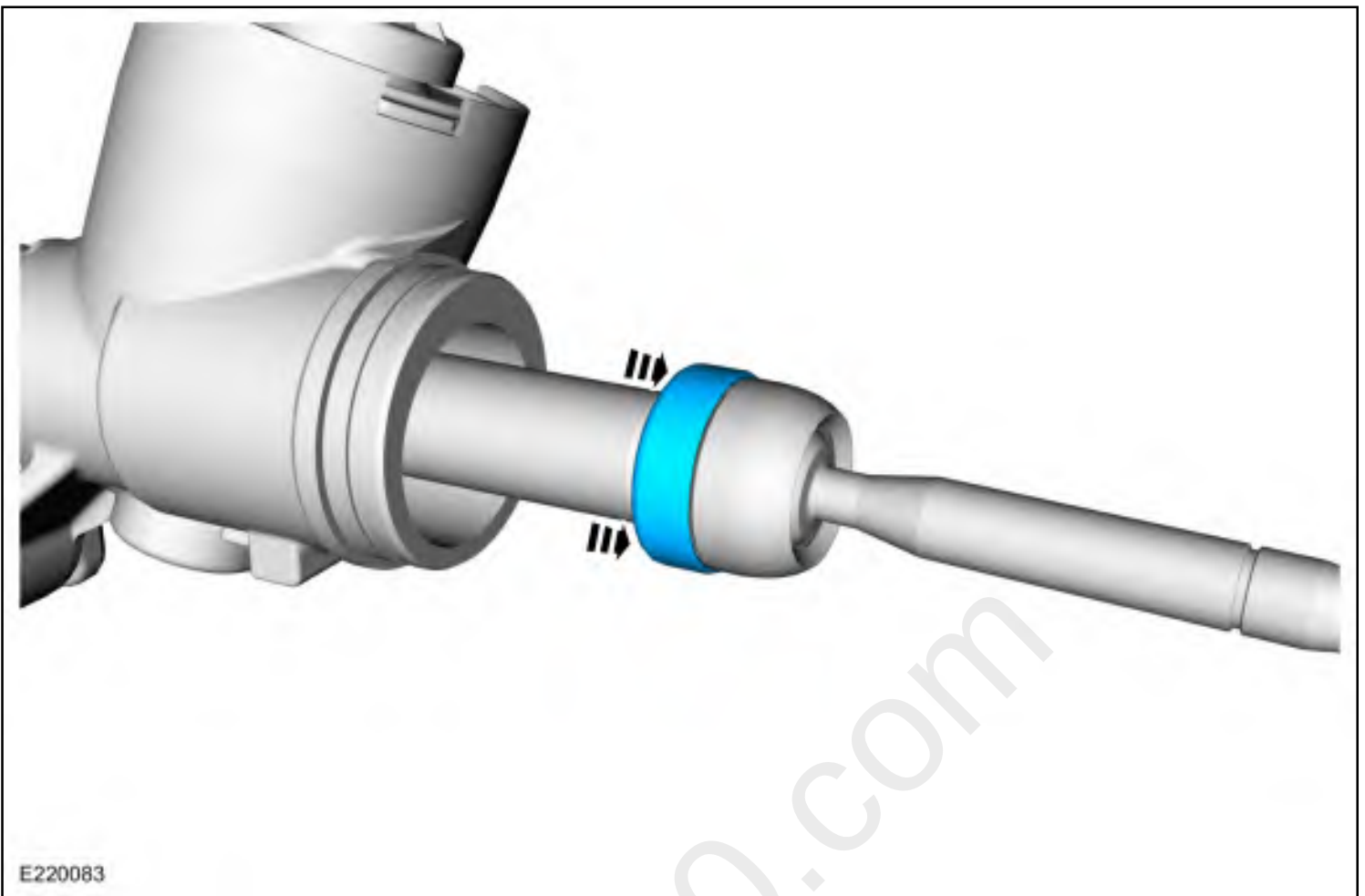
Torque: 89 lb.ft (120 Nm)



3. **NOTICE:** Install the steering stop using hand force only. Striking the steering stop may cause damage to the stop.

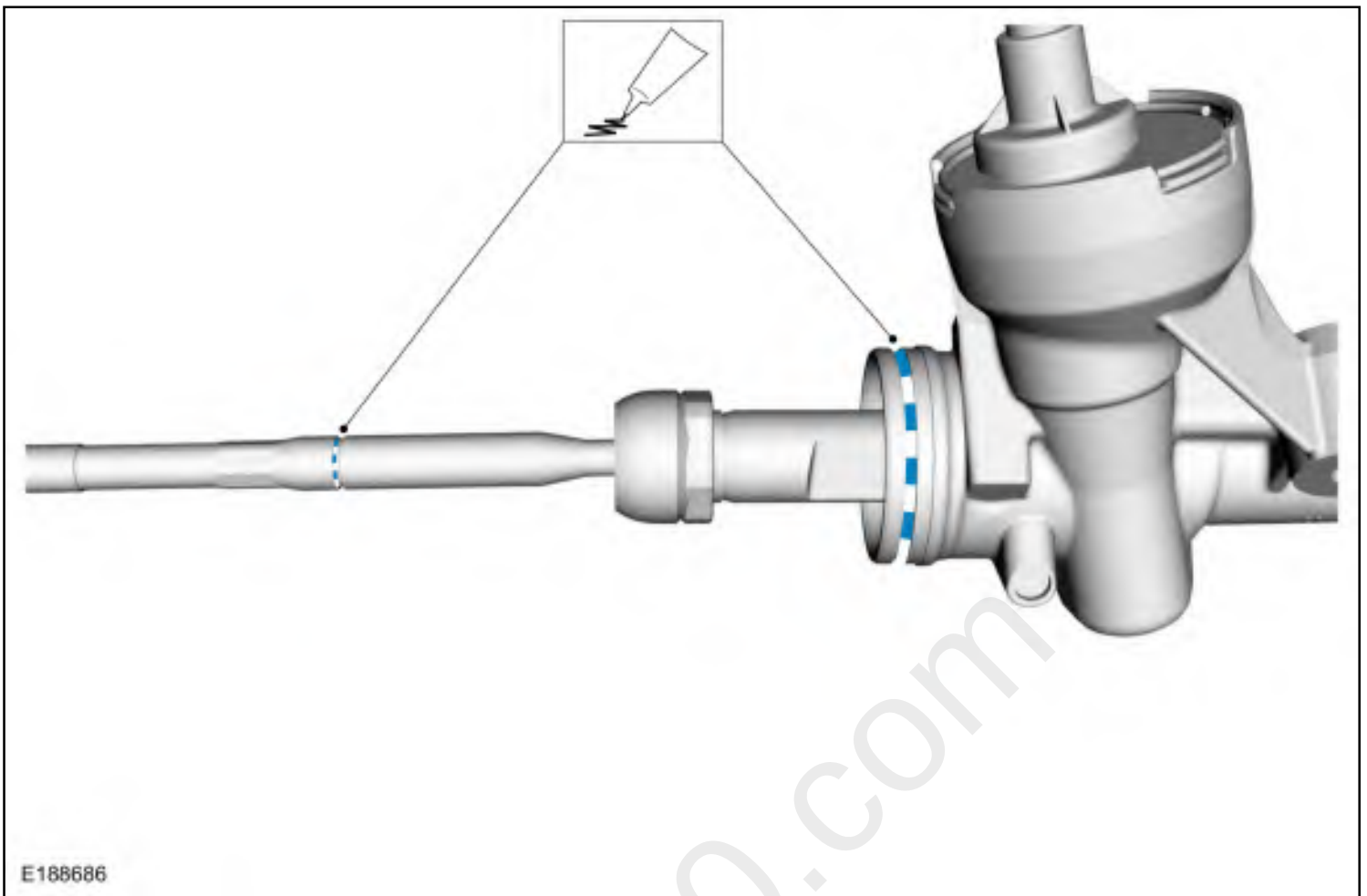
NOTE: An audible click will be heard when the steering stop seats onto the inner tie rod. Make sure that the steering stop is fully seated and cannot be separated by hand.

Install the steering stop onto the inner tie rod using hand force only.



4. Apply the specified grease to the steering gear-to-bellows boot mating surface and bellows boot groove on the inner tie-rod.

Material: Motorcraft® Premium Long-Life Grease / XG-1-E1 (ESA-M1C75-B)

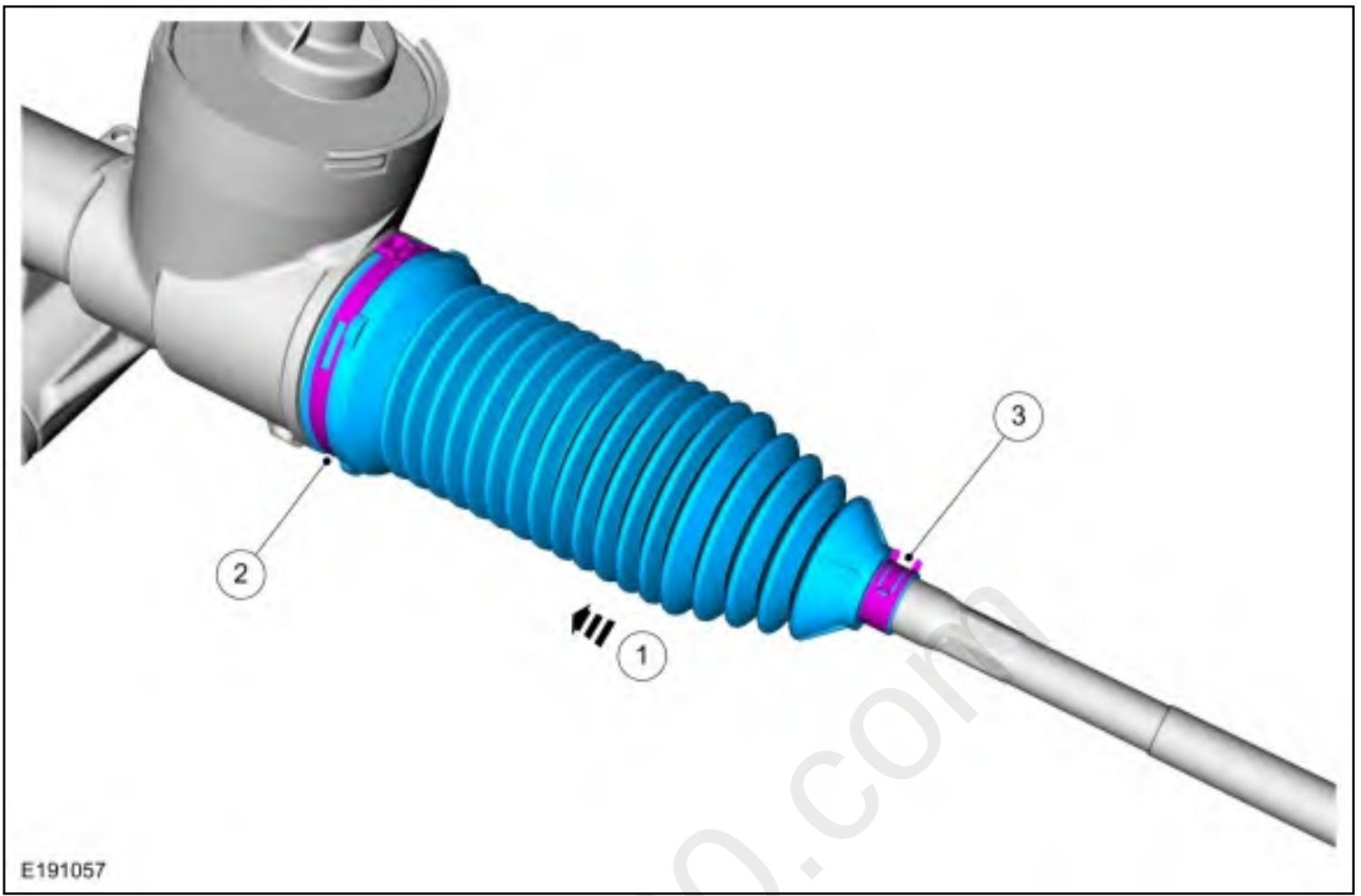


5. **NOTE:** *LH side shown, RH side similar.*

1. **NOTE:** *Make sure the steering gear bellows boot is positioned correctly over the steering gear housing bead and the groove in the inner tie rod.*

Install the new steering gear bellows boot.

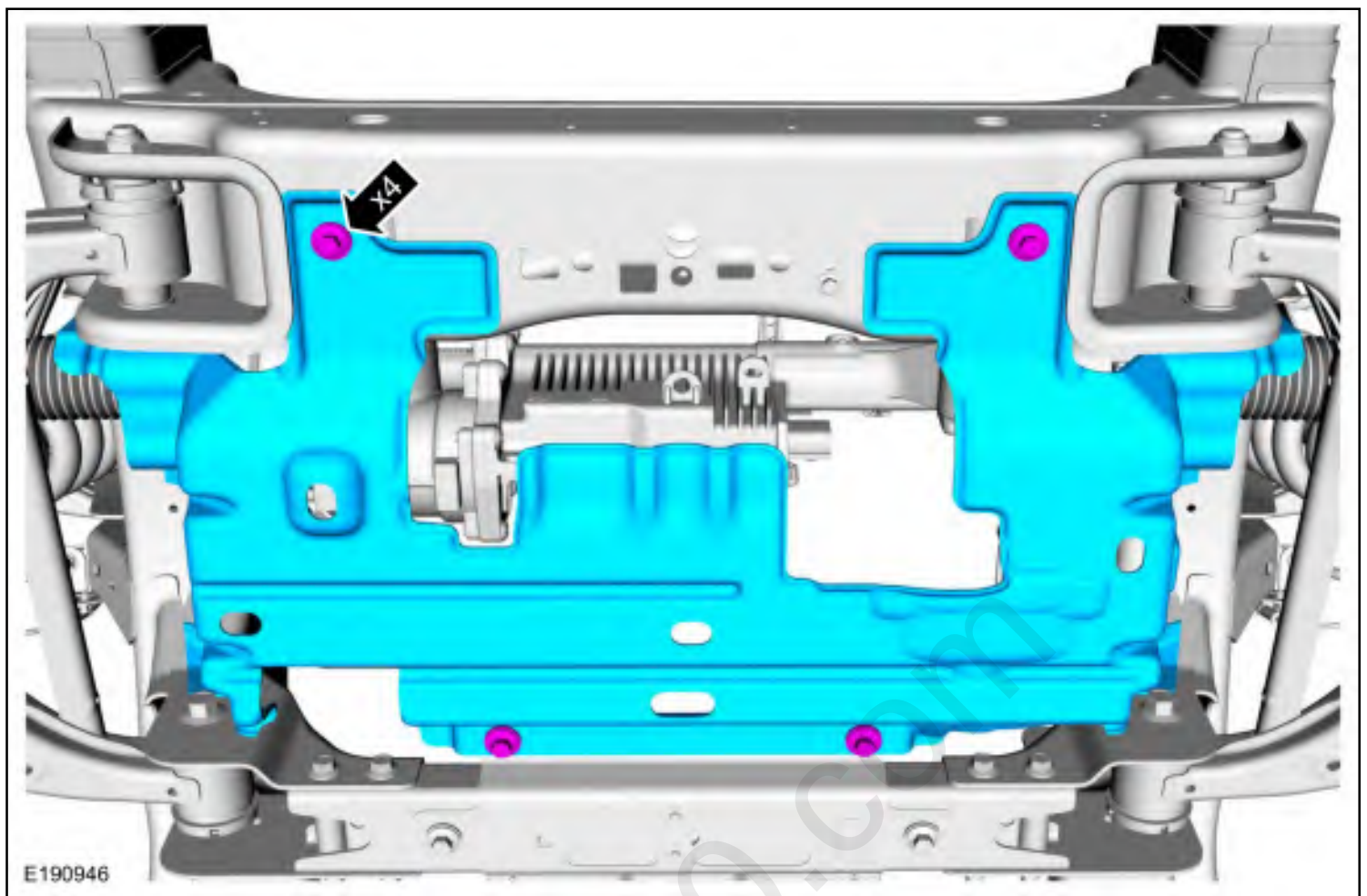
2. Install the new inner bellows boot clamp.
Use the General Equipment: Boot Clamp Pliers
3. Install the new outer bellows boot clamp.



6. **NOTE:** *If equipped.*

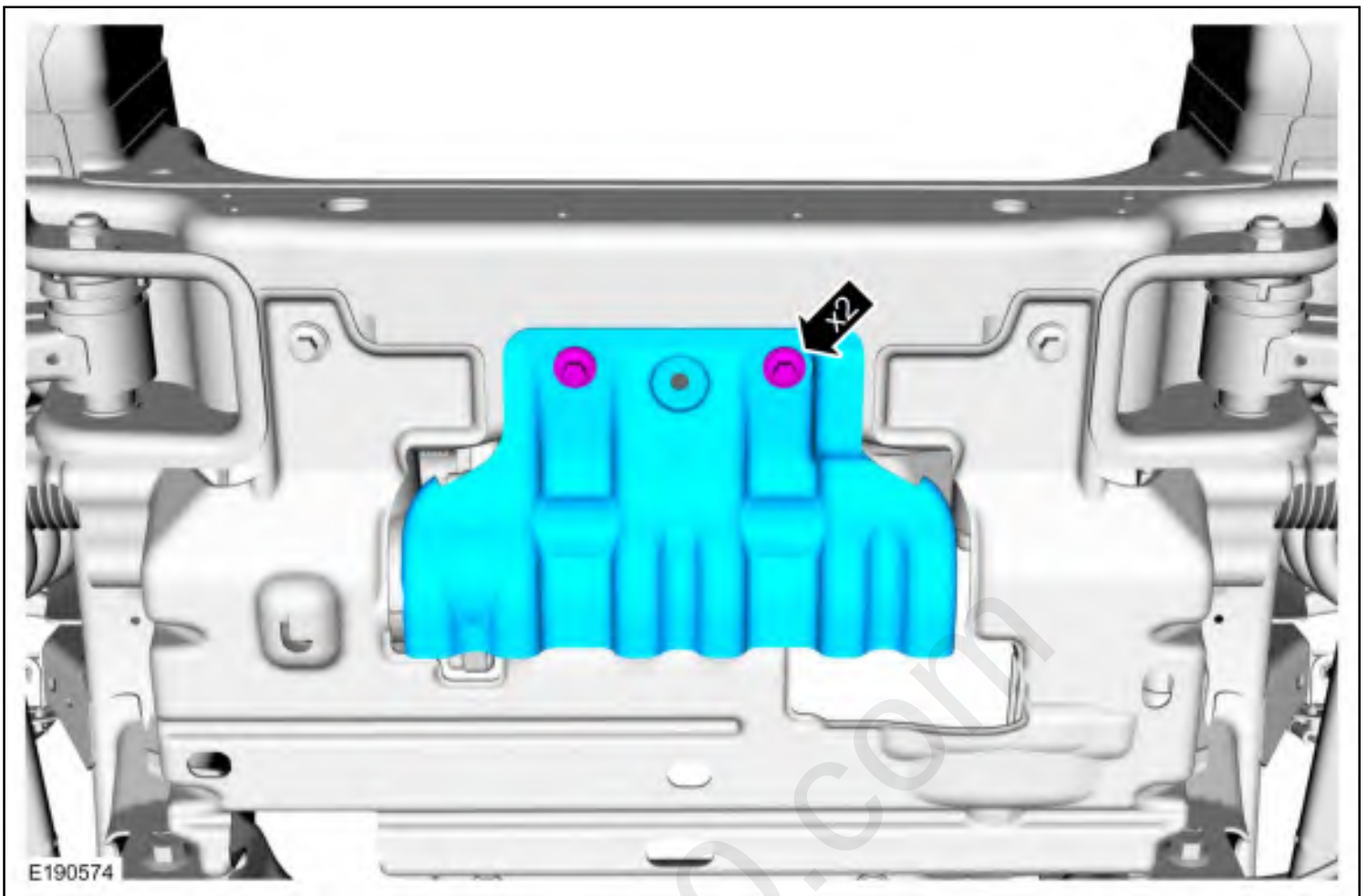
NOTE: *4WD shown, RWD similar.*

Install the underbody shield and the underbody shield bolts.
Torque: 30 lb.ft (40 Nm)



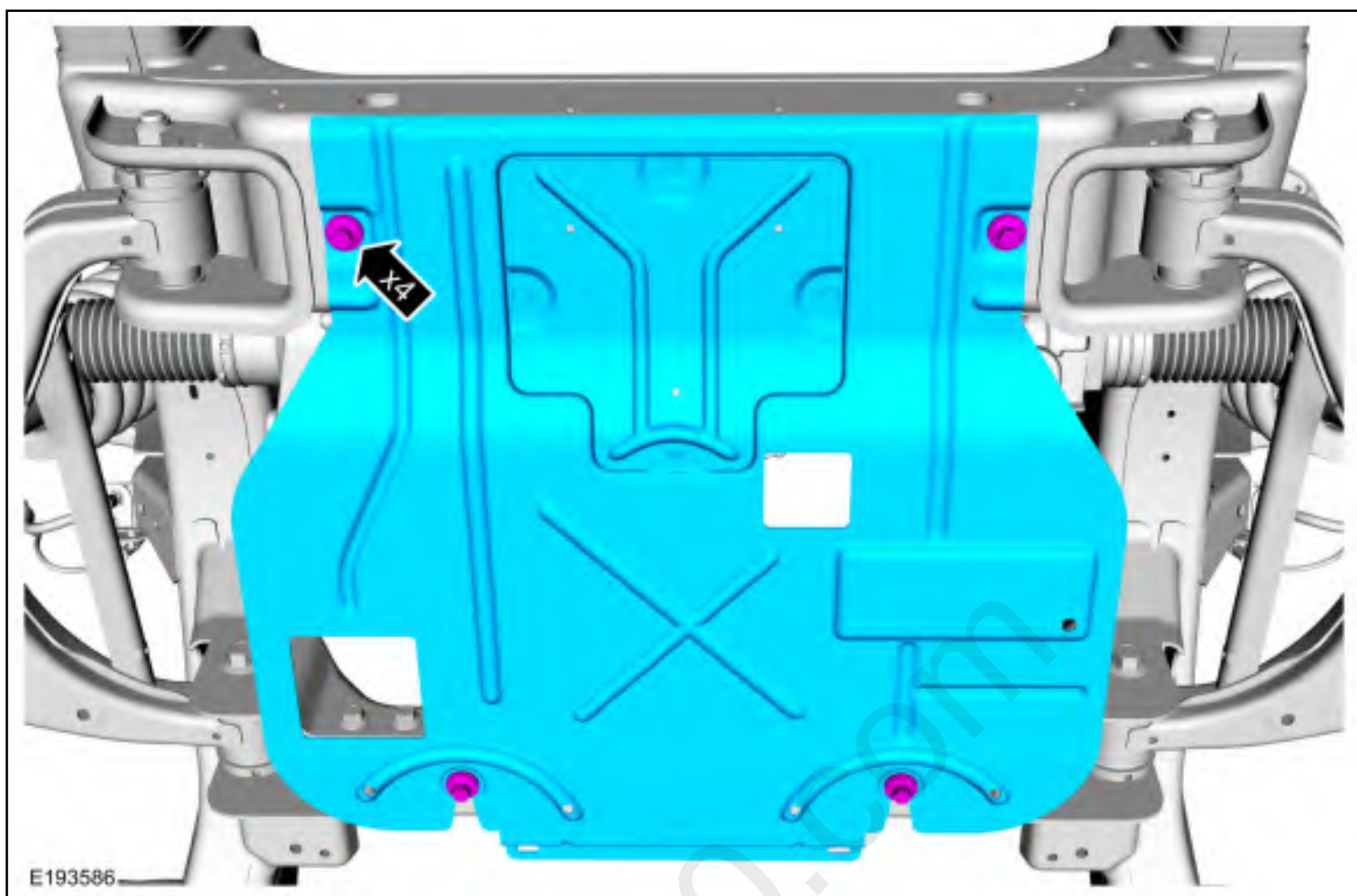
7. **NOTE:** *If equipped.*

Install the underbody shield and install the 2 underbody shield bolts.
Torque: 30 lb.ft (40 Nm)



8. **NOTE:** *If equipped.*

Install the underbody shield and install the 4 underbody shield bolts.
Torque: 30 lb.ft (40 Nm)



9. Thread the tie-rod end jam nut onto the inner tie rod.



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10. Turn the steering wheel lock-to-lock to assure the steering stops are fully seated.

11. Install the tie rod end.

Refer to: [Tie Rod End](#) (211-02 Power Steering, Removal and Installation).