

Body - 6.7L Power Stroke Diesel

Special Tool(s) / General Equipment

Hose Clamp Remover/Installer

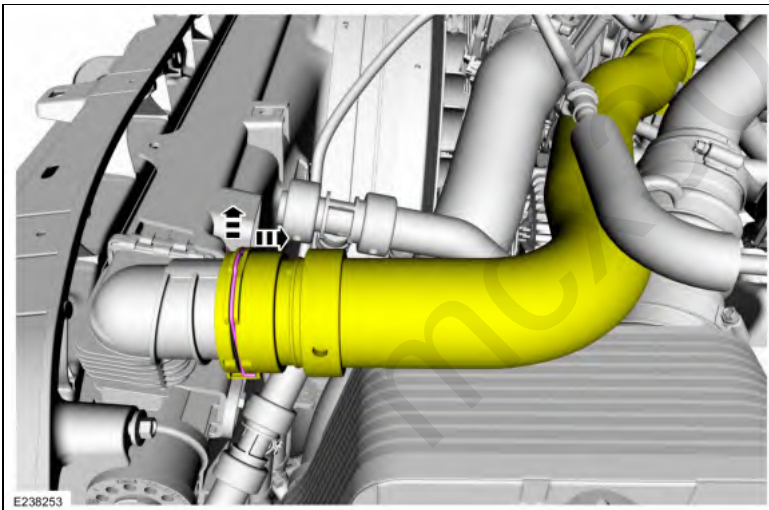
Removal

NOTE: Crew Cab with automatic transmission shown, all others similar.

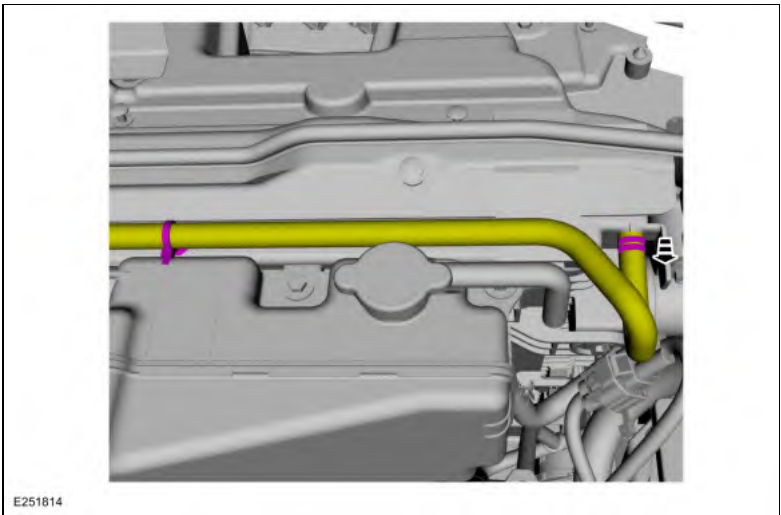
NOTE: Use a 2-post hoist to lift the body from the chassis.

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

1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: Jacking and Lifting - Overview (100-02 Jacking and Lifting, Description and Operation).
2. Recover the A/C system refrigerant.
Refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging (412-00 Climate Control System - General Information, General Procedures).
3. Drain the engine coolant and secondary coolant system.
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03B Engine Cooling - 6.7L Power Stroke Diesel, General Procedures).
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03C Powertrain Secondary Cooling - 6.7L Power Stroke Diesel, General Procedures).
4. If equipped, remove the running boards.
Refer to: Power Running Board (PRB) (501-08 Exterior Trim and Ornamentation, Removal and Installation).
Refer to: Running Board (501-08 Exterior Trim and Ornamentation, Removal and Installation).
5. Remove the LH battery.
Refer to: Battery (414-01 Battery, Mounting and Cables, Removal and Installation).
6. Release the clip and disconnect the upper radiator hose.

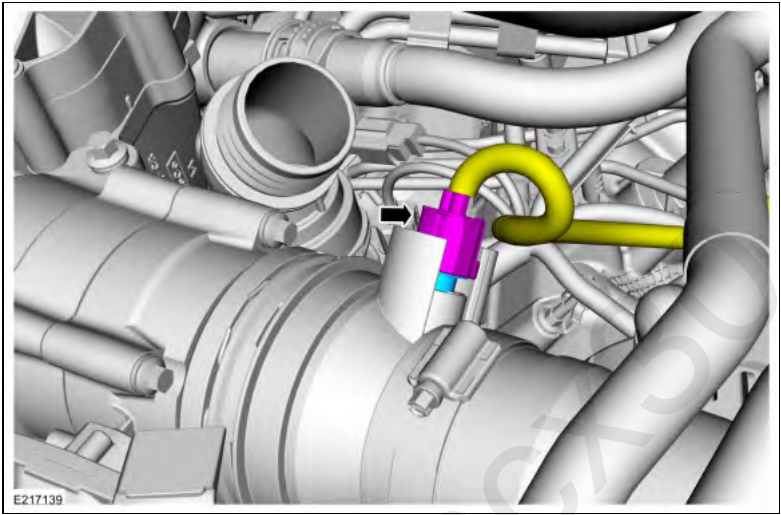


7. Disconnect the coolant overflow hose.

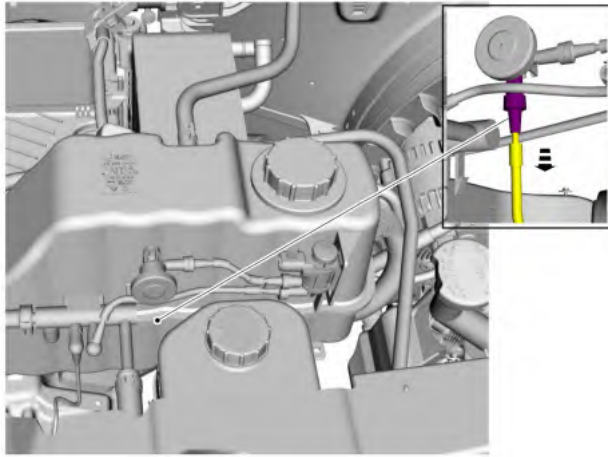


8. **NOTICE:** Disconnect wire harness retainers to avoid damage to the wire harness prior to raising the body off the chassis.

Disconnect the CAC temperature sensor electrical connector and disconnect the wiring harness retainers.



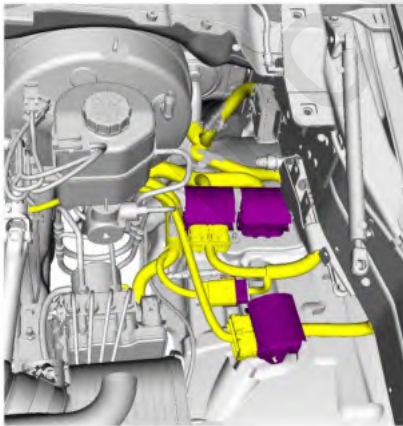
9. If equipped with 4WD, disconnect the vacuum hose from the vacuum solenoid.



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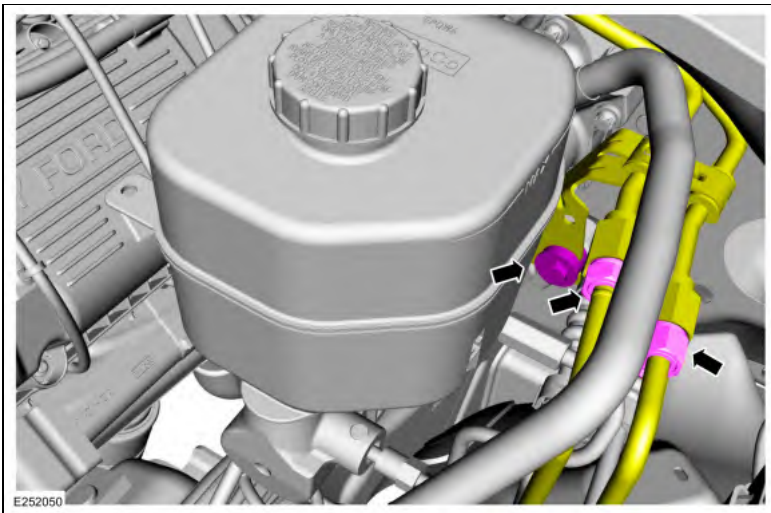
10. Remove the LH battery tray, CAC and degas bottle assemblies.
Refer to: Battery Tray (414-01 Battery, Mounting and Cables, Removal and Installation).
Refer to: Charge Air Cooler (CAC) (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
11. **NOTICE: Disconnect wire harness retainers to avoid damage to the wire harness prior to raising the body off the chassis.**
Disconnect the electrical connectors in the LH engine compartment.



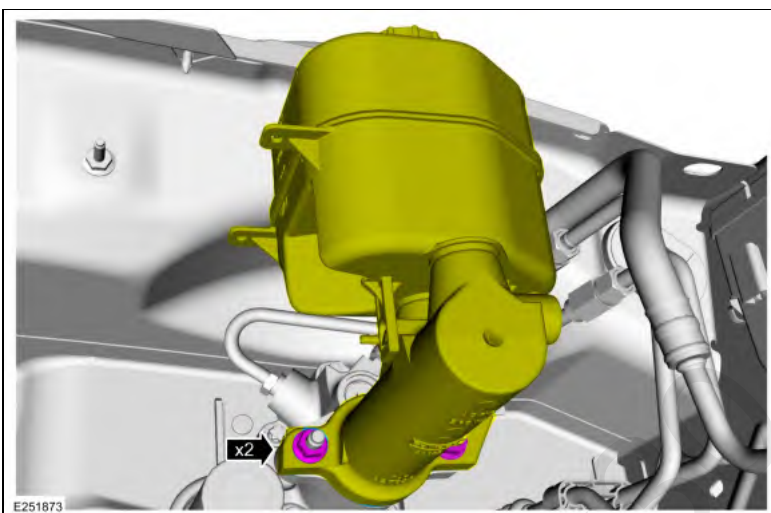
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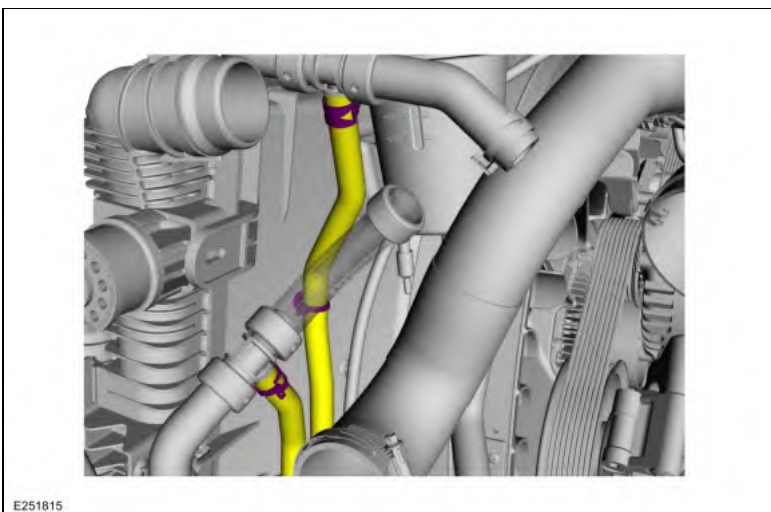
12. Remove the power steering reservoir and drain.
Refer to: Power Steering Fluid Reservoir (211-02 Power Steering, Removal and Installation).
13. If equipped with manual transmission, remove the clutch master cylinder.
Refer to: Clutch Master Cylinder (308-02 Clutch Controls, Removal and Installation).
14. **NOTE: Make sure o-ring on the back of the master cylinder is seated correctly before reinstalling the master cylinder.**
Pump the brake pedal several times.
 - If equipped, remove the caps.
 - Detach the wiring harness retainers.
 - Disconnect the brake fluid level sensor electrical connector and position the wiring harness aside.



18. Remove the nuts and position aside the brake master cylinder.
Torque: 16 lb.ft (22 Nm)



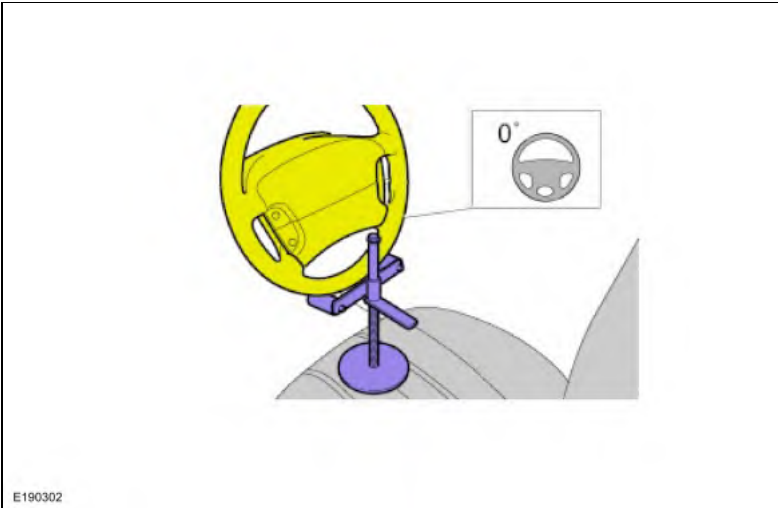
19. Disconnect and position aside the fuel cooler hoses.
Use the General Equipment: Hose Clamp Remover/Installer



20. **NOTE:** Do not allow the steering column to rotate while the steering column shaft is disconnected or damage to the steering column internal sensor may result.

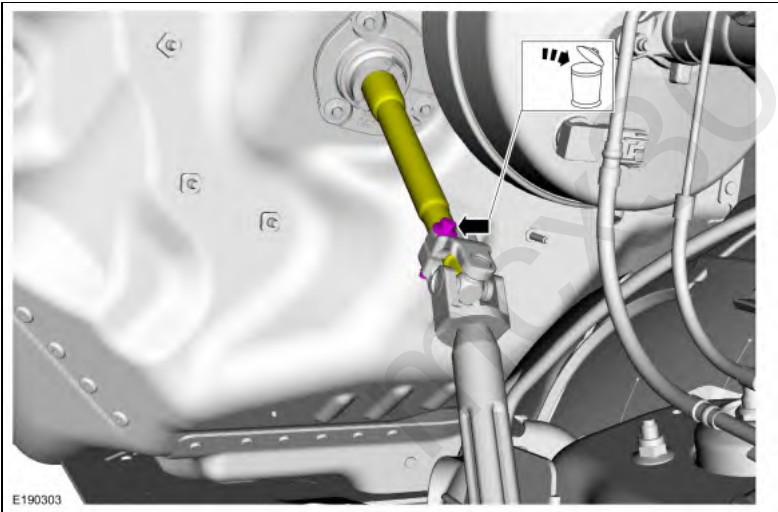
NOTE: Use a steering wheel holding device (such as Hunter[®] 28-75-1 or equivalent).

Keep the steering wheel in the straight-ahead position.

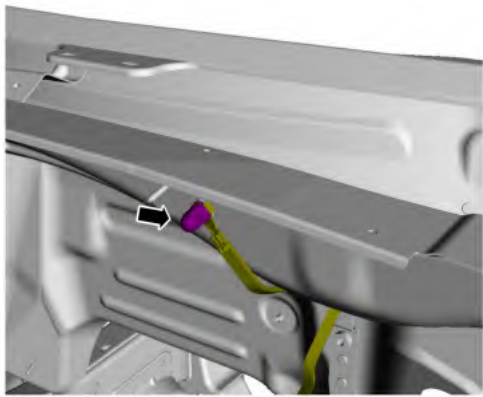


21. **NOTICE:** Install a new steering column shaft bolt. Reuse could result in bolt failure and loss of vehicle control. Failure to follow this instruction may result in serious injury to vehicle occupant(s). Remove and discard the bolt and disconnect the upper shaft from the lower shaft.

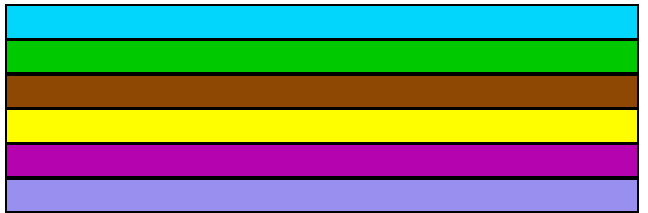
Remove and discard the bolt and disconnect the upper steering shaft from the lower steering shaft.
Torque: 22 lb.ft (30 Nm)



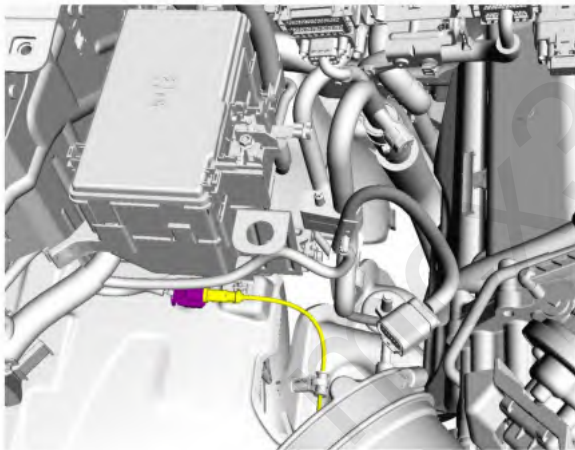
22. Remove the bolt, and position the LH ground strap aside.
Torque: 89 lb.in (10 Nm)



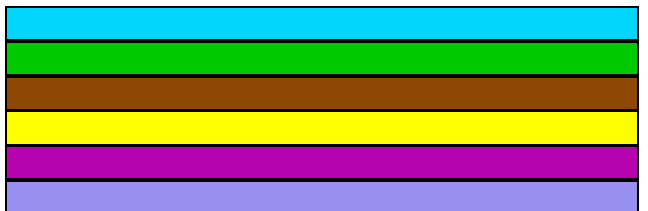
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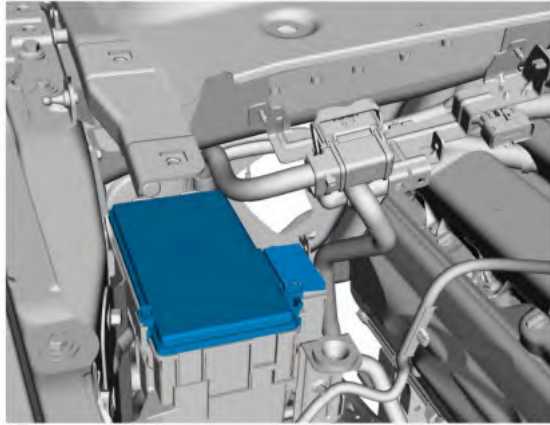
23. Remove the air cleaner assembly.
Refer to: Air Cleaner (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
24. Disconnect the electrical connector on the RH fuse box.



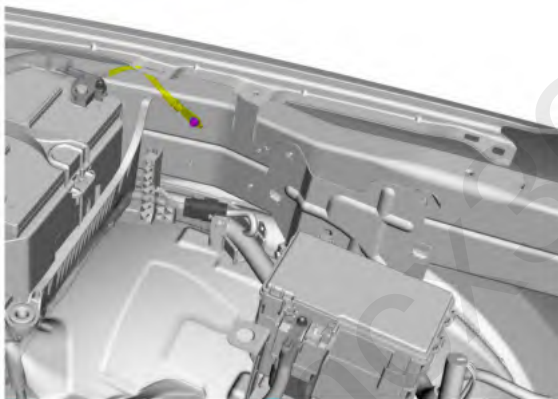
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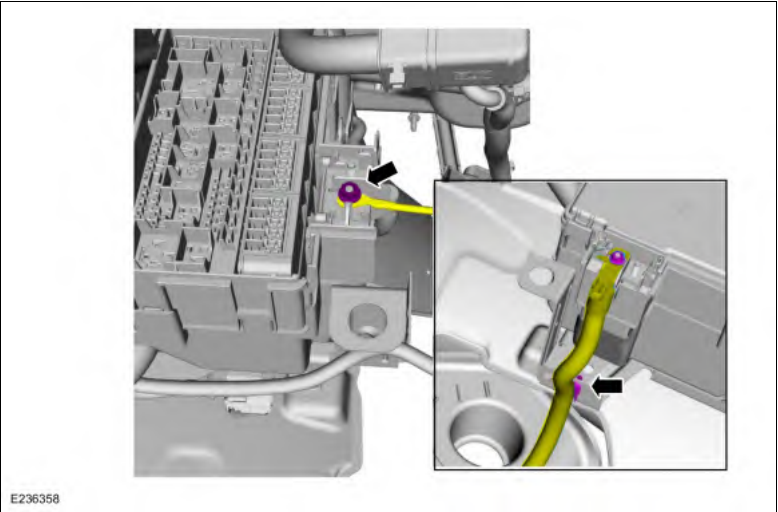
25. Detach the RH battery buss cover.



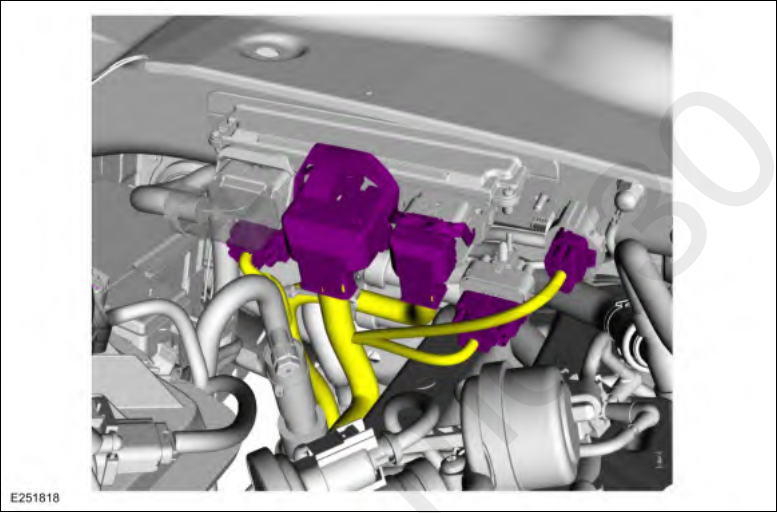
26. Disconnect the ground wire from the RH negative battery cable to the body.
Torque: 106 lb.in (12 Nm)



27. Remove the nut and disconnect the RH battery positive cable from the RH battery buss and detach the cable retainer clip.
Torque: 89 lb.in (10 Nm)



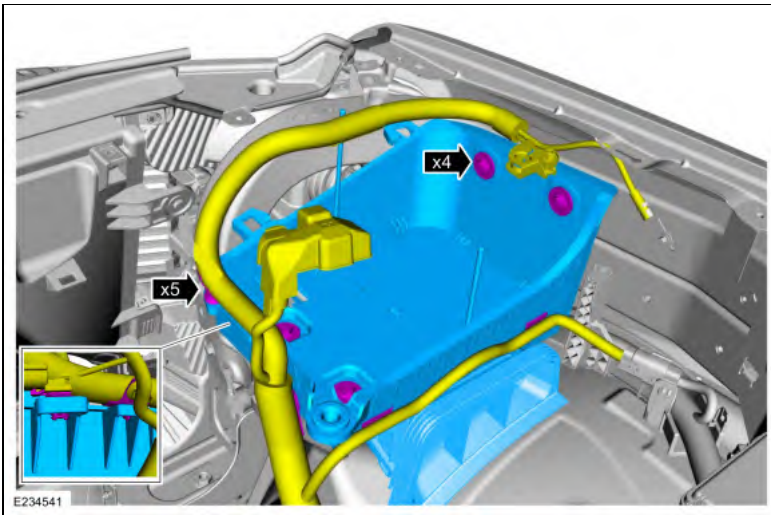
28. Disconnect the PCM electrical connectors and wiring harness retainers.



29. **NOTICE:** Disconnect wire harness retainers to avoid damage to the wire harness prior to raising the body off the chassis.

NOTE: *Vehicles without dual alternators.*

Remove the RH battery, battery tray and position aside the battery cables and wiring harness.
Refer to: Battery (414-01 Battery, Mounting and Cables, Removal and Installation).

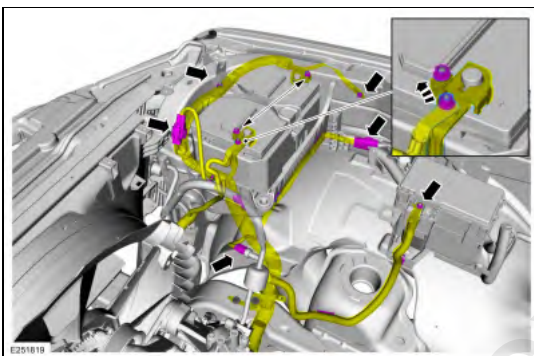


30. **NOTICE:** Disconnect wire harness retainers to avoid damage to the wire harness prior to raising the body off the chassis.

NOTE: *Vehicles with dual alternators.*

If equipped with dual alternators, disconnect, separate and position aside the battery cables and wiring harness.

Torque: 80 lb.in (9 Nm)



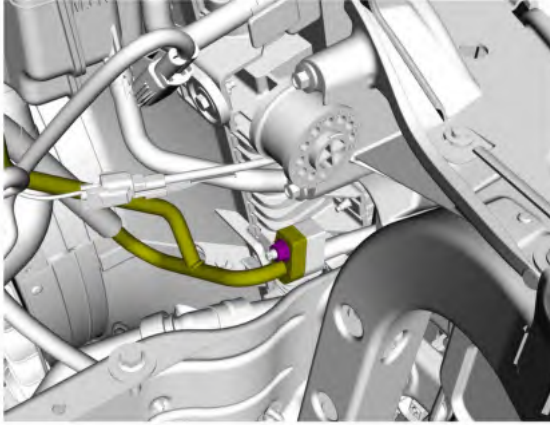
31. Disconnect remaining wire harness connectors as required in RH engine bay.

32.

Disconnect the A/C compressor-to-condenser discharge line at the condenser and position the line aside.

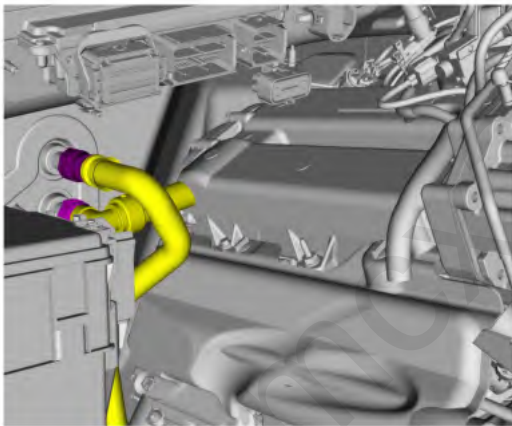
- Discard the O-rings and cap off the fittings.

Torque: 133 lb.in (15 Nm)



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33. Disconnect the heater core-to-engine hoses.



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34. Position a suitable drain pan under the coolant hoses at the water pump.

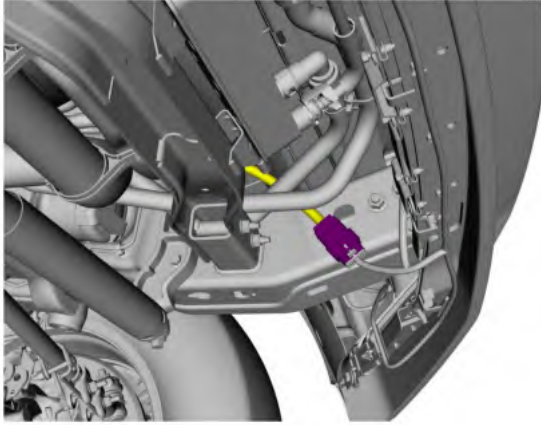
- 35.
- Release the spring clips on water pump coolant hoses and disconnect.
 - Drain the coolant from the water pump.

A horizontal bar chart consisting of six stacked rectangular segments of equal height. From top to bottom, the colors are cyan, green, brown, yellow, magenta, and light blue. The segments are separated by thin black lines. The entire chart is enclosed in a black rectangular border.

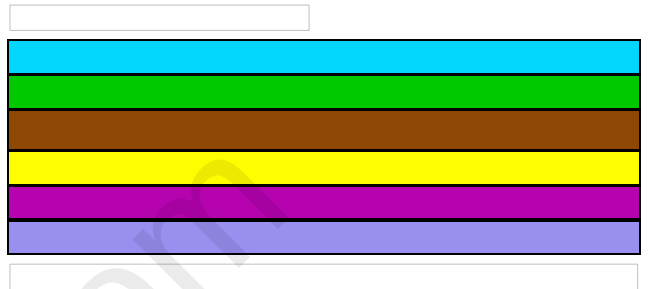
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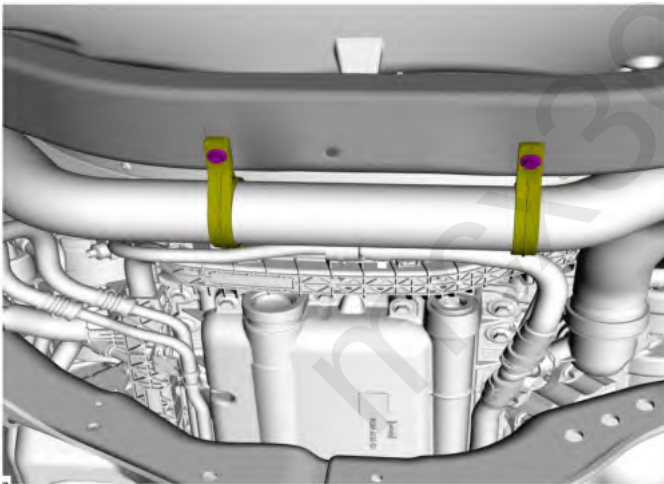
37. If equipped, disconnect the fog lamp connector.



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38. Remove the screws and position aside the retainer straps on the lower radiator hose.
Torque: 55 lb.in (6.2 Nm)



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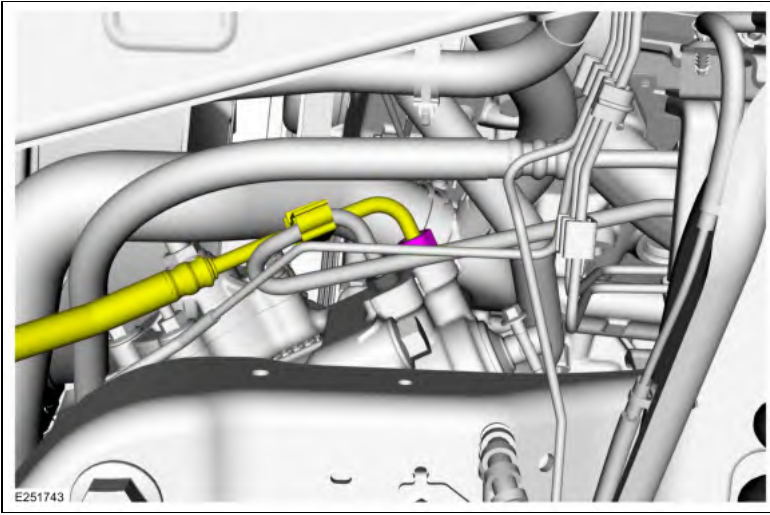
39. Disconnect the lower radiator hose and position aside.



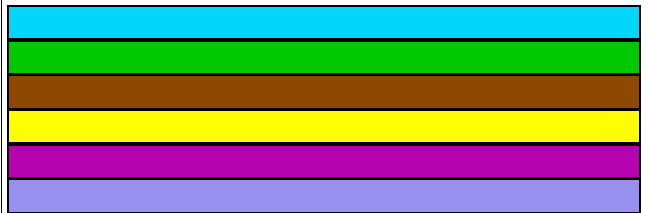
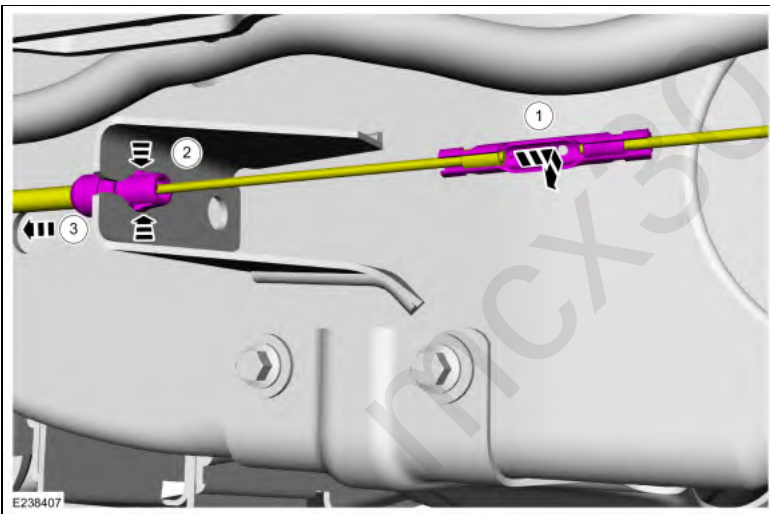
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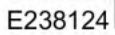
- Unclip and disconnect the power steering return line at the steering gear, discard the o-ring seal and position aside.
Torque: 26 lb.ft (35 Nm)



42. Release tension on the parking brake cable.
Refer to: Parking Brake Cable Tension Release (206-05 Parking Brake and Actuation, General Procedures).
43. Remove the cable and conduit from the frame bracket.



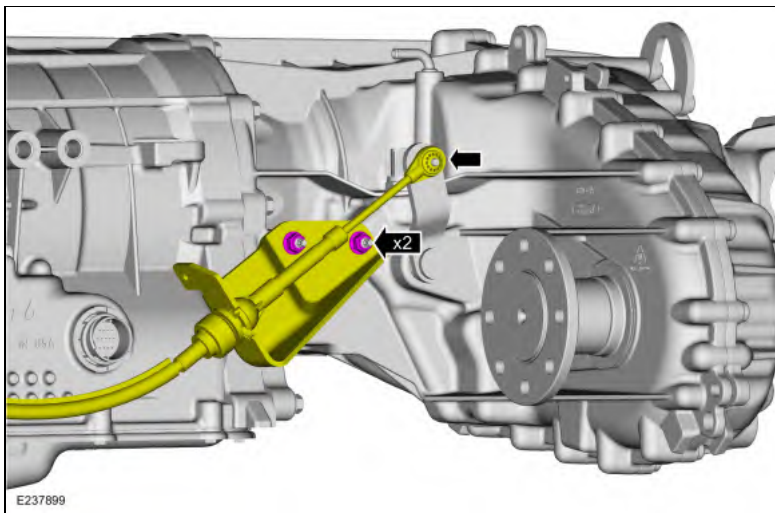
44. Remove the bolt and position the RH body ground strap aside.
Torque: 18 lb.ft (25 Nm)

A horizontal bar chart consisting of six stacked rectangular segments of equal width. From top to bottom, the segments are colored cyan, green, brown, yellow, magenta, and light blue. The segments are separated by thin black lines. The entire chart is set against a white background.

A horizontal bar chart with six bars of equal length, colored cyan, green, brown, yellow, magenta, and light blue from top to bottom.

- tion the manual shift lever cable aside.

Remove manual shift lever cable bracket nuts, disconnect the cable from the lever and position the manual shift lever cable aside.
Torque: 20 lb.ft (27.5 Nm)



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

Position a floor jack on the (FESM) core support and apply pressure to the cage nuts to prevent spinning during removal.

- Remove and discard the Front End Sheet Metal (FESM) body mount bolts using an impact wrench.
Torque: 76 lb.ft (103 Nm)



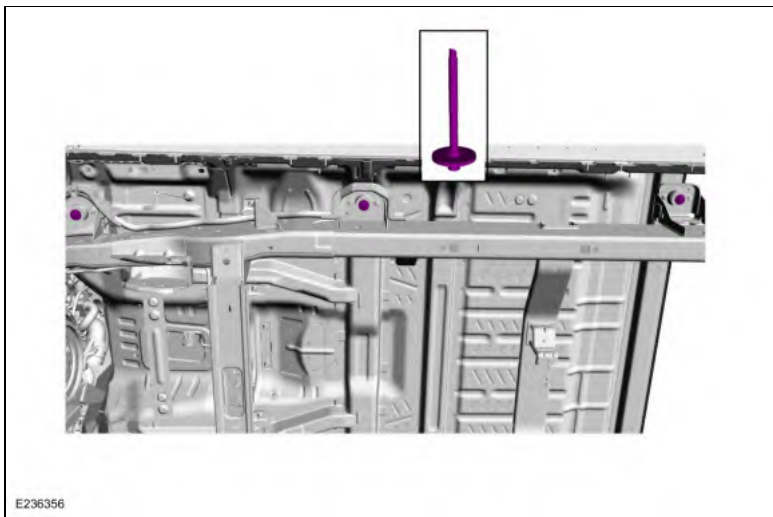
48. **NOTE:** *Crew Cab shown, all others similar.*

NOTE: *LH side shown, RH similar.*

NOTE: On Dual Rear Wheel vehicles add plus 90Â° angle to torque value listed below.

Remove and discard the remaining body mount bolts with an impact wrench starting with the rear bolts.

Torque: 76 lb.ft (103 Nm)



49. Place several fender covers between the cab and the pickup bed.
50. **NOTE:** *Mark the position of the tires to aid in aligning the cab to the chassis.*
- Mark the position of the tires on the floor.
51. Position equally side-to-side the hoist lifting pads below the pinch welds on the body at the furthest most front and rear positions.
52. Using the Universal Cab Hold-Down Straps or equivalent, secure the vehicle to the hoist.
53. **NOTICE:** *Prior to raising the cab on the lift, verify that the steering shaft is clear of obstruction and has been positioned aside to prevent damage to shaft assembly.*
- Lift the body from the chassis.

Installation

1. **NOTICE:** *Prior to lowering the cab on the lift, verify that the steering shaft is clear of obstruction and has been positioned aside to prevent damage to shaft assembly.*
2. To install, reverse the removal procedure.
 - Align the tires to the marks on the floor.
 - With aide of an assistant in alignment, lower the body on the chassis.
 - Install new bolts for all discarded.