

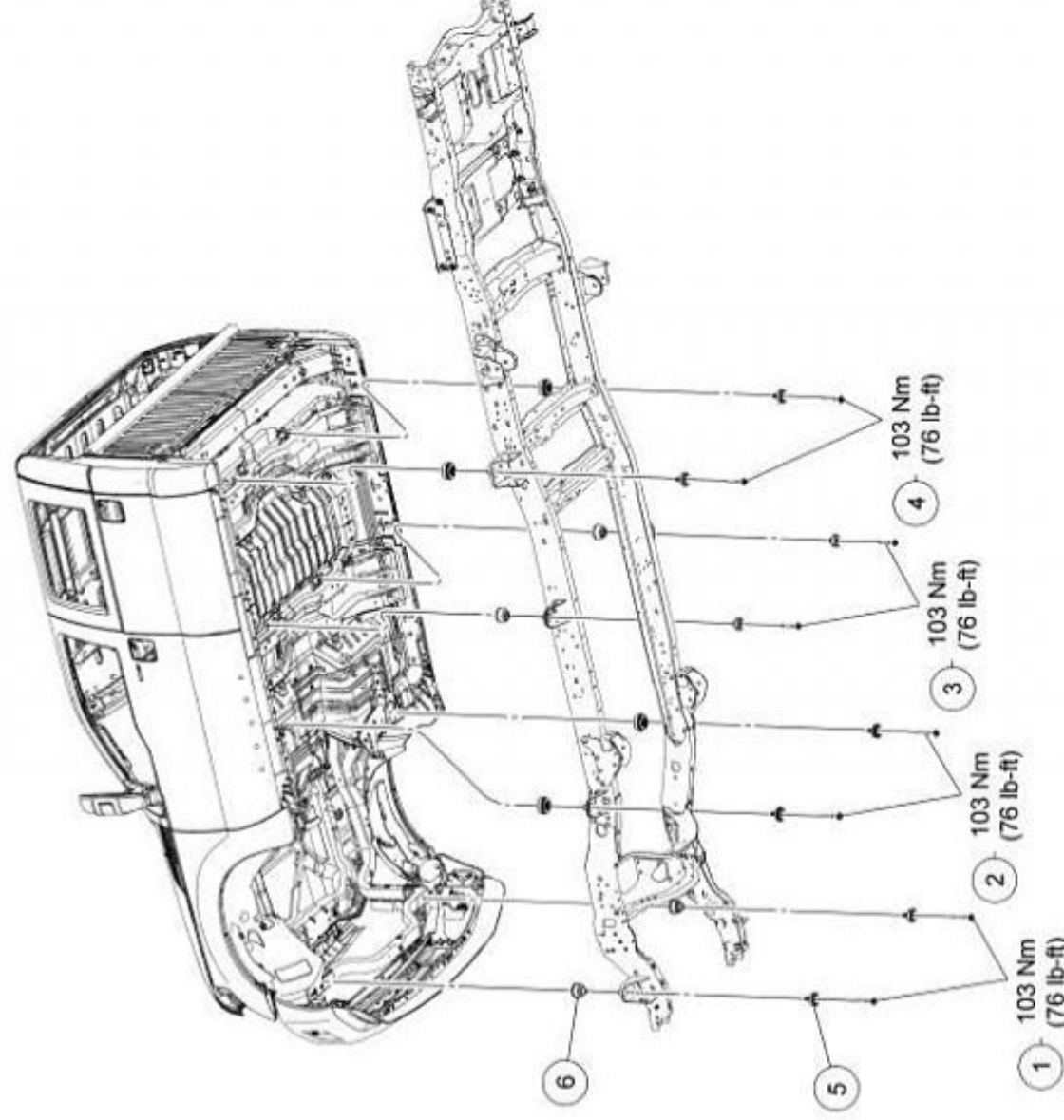
**SECTION 502-02: Full Frame and Body Mounting  
REMOVAL AND INSTALLATION**2014 F-250, 350, 450, 550 Super Duty Workshop Manual  
Procedure revision date: 07/10/2013**Body — Diesel****Special Tool(s)**

 ST33035-A	Universal Cab Hold-Down Strap 138-04411 or equivalent
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**Material**

Item	Specification
Threadlock and Sealer TA-25	WSK-M2G351-A5

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



N0113627

Item	Part Number	Description
1	W715132	Front End Sheet Metal (FESM) body mount bolts (all vehicles) (2 required)
2	W715132	Body mount No. 1 bolts (all vehicles) (2 required)
3	W712879	Body mount No. 2 bolts (Crew Cab only) (2 required)
4	W715132	Body mount No. 3 bolts (all vehicles) (2 required)
5	1000155	Body mount lower insulator (all vehicles) (8 required for Crew Cab, 6 required for all others)
6	1000154	Body mount upper insulator (all vehicles) (8 required for Crew Cab, 6 required for all others)

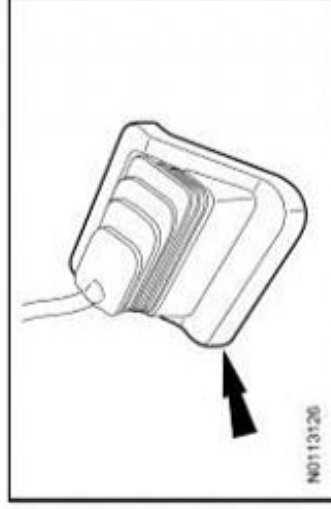
**Removal and Installation****All vehicles**

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

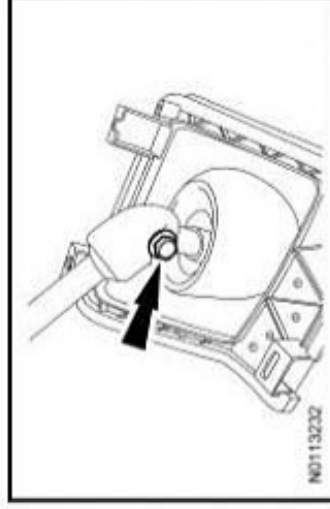
1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to [Section 100-02](#).

#### Four-Wheel Drive (4WD) vehicles

2. Lift up on the transfer case shift lever boot and bezel to access the shift lever bolt.



3. Remove the bolt and the shift lever.
  - To install, tighten to 27 Nm (20 lb-ft).



#### All vehicles

4. Recover the A/C system refrigerant. For additional information, refer to [Section 412-00](#).
5. Drain the engine coolant and secondary cooling system. For additional information, refer to [Section 303-03B](#) and [Section 303-03C](#).
6. Disconnect the battery cables from the LH and RH batteries. For additional information, refer to [Section 414-01](#).
7. Separate the leads from the RH battery positive cable.
  - To install, tighten to 9 Nm (80 lb-in).
8. Separate the leads from the RH battery negative cable.
  - To install, tighten to 9 Nm (80 lb-in).
9. Remove the battery hold-down clamp nut.
  - To install, tighten to 4 Nm (35 lb-in).



10. Remove the LH battery. For additional information, refer to [Section 414-01](#).

#### All vehicles

11. Remove the 4 LH battery tray bolts.
- To install, tighten to 18 Nm (159 lb-in).



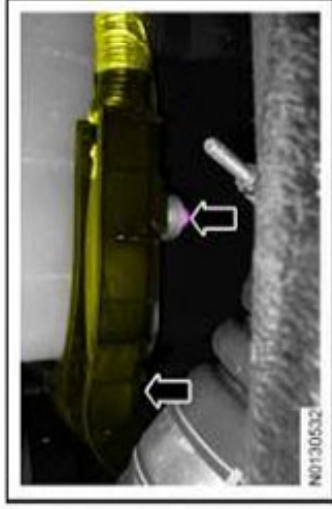
12. Release the clip and disconnect the upper radiator hose at the radiator.



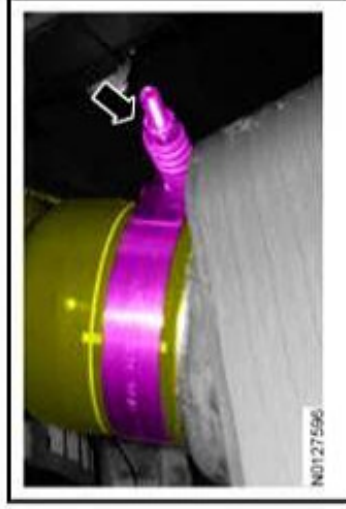
13. Disconnect the hose at the degas bottle.
- Release the spring clamp.
  - Disconnect the hose.



14. Remove the 2 pin-type retainers at the degas bottle and position the battery cable aside.



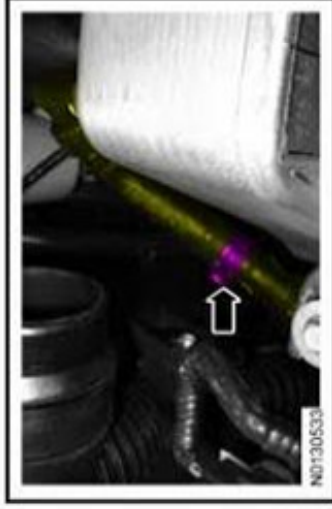
15. Disconnect the Charge Air Cooler (CAC) inlet tube.
- Release the CAC inlet tube-to- CAC clamp.
    - To install, tighten to 9 Nm (80 lb-in).
  - Disconnect the CAC inlet tube.



16. Disconnect the CAC coolant outlet hose at the CAC.



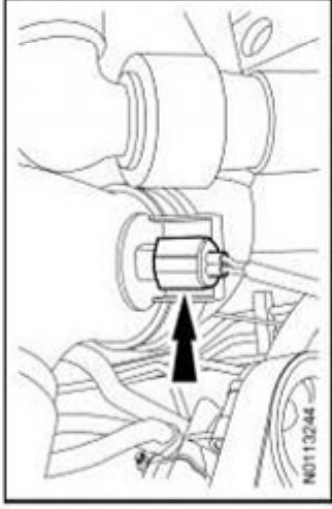
17. Disconnect the CAC coolant outlet hose at the spring clip and position the tube aside.



18. Disconnect the Charge Air Cooler Temperature (CACT) sensor electrical connector and disconnect the wiring harness



retainer.



19. Disconnect the CAC tube outlet tube at the engine .



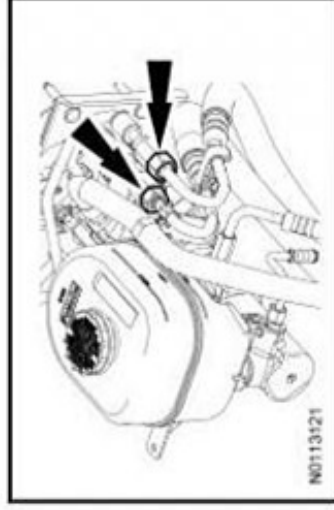
20. Disconnect the degas bottle-to-engine hose.



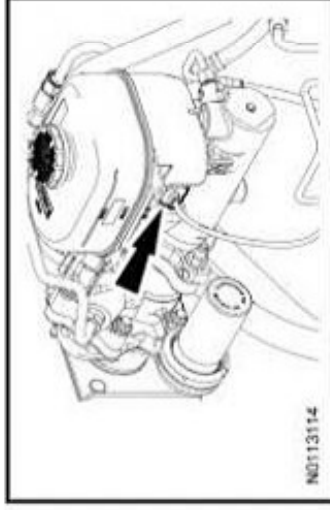
21. If equipped, disconnect the 4X4 vacuum hose.



22. If equipped, disconnect the Constant Vacuum Hublock (CVH) solenoid electrical connector and regulator vacuum hose.



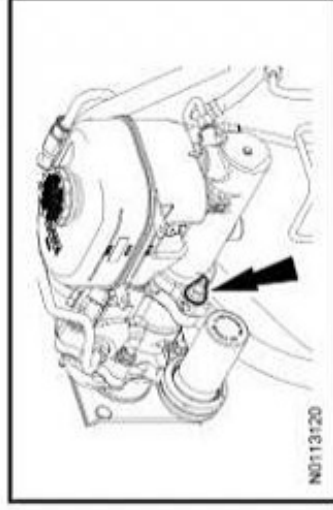
29. Disconnect the brake fluid level switch electrical connector and release wiring harness retainers.



30. **NOTE:** The brake master cylinder nuts are a torque-prevailing type and cannot be reused.

Remove and discard the 2 brake master cylinder nuts (1 shown) and then position the brake master cylinder aside.

- To install:
  - For vacuum boost equipped vehicles, tighten the new nuts to 23 Nm (17 lb-ft).
  - For Hydro-Boost® equipped vehicles, tighten the new nuts to 30 Nm (22 lb-ft).



31. Disconnect the 2 fuel cooler hoses from T-fittings.

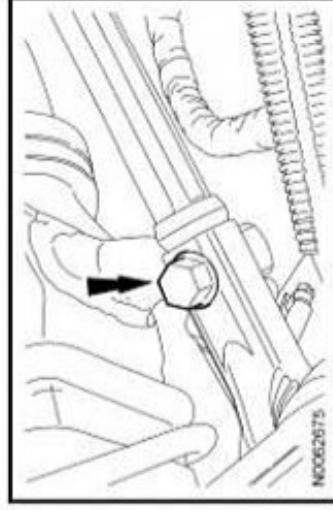


32. **NOTICE:** Do not allow the steering column shaft to rotate while the intermediate shaft is disconnected or damage to the clockspring can result. If there is evidence that the shaft has rotated, remove and recenter the

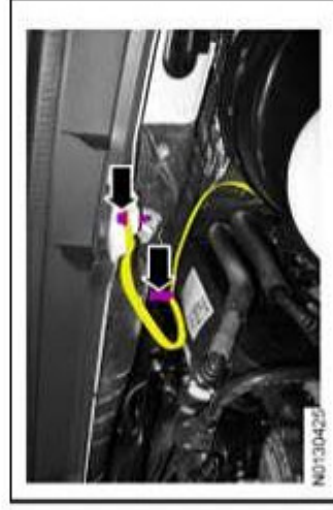
**clockspring. For additional information, refer to [Section 501-20B](#).**

Remove and discard the intermediate shaft bolt, then disconnect the lower steering column shaft from the upper steering column shaft.

- To install, tighten the new bolt to 48 Nm (35 lb-ft).



33. Remove the bolt, release the wiring harness retainer and position the LH engine ground strap aside.
  - To install, tighten to 10 Nm (89 lb-in).

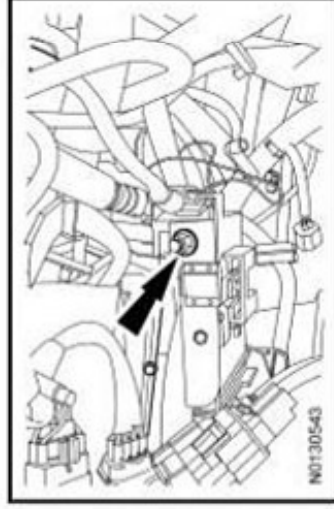


34. Remove the Air Cleaner (ACL) housing box.
  1. Disconnect the Mass Air Flow (MAF) sensor electrical connector.
  2. Remove the ACL housing bolt
    - To install tighten to 6 Nm (53 lb-in).
  3. Loosen the ACL outlet pipe clamp.
    - To install tighten to 4 Nm (35 lb-in).
  4. Remove the ACL assembly.

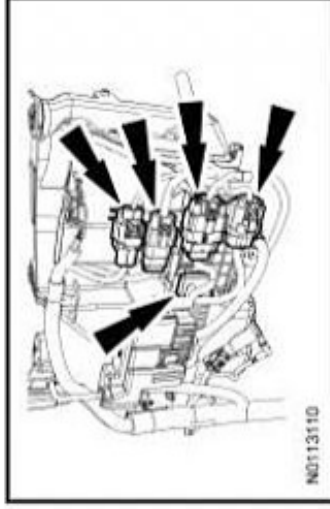


35. Detach the RH battery buss cover.
36. Remove the nut and disconnect the RH battery positive cable from the RH battery buss.

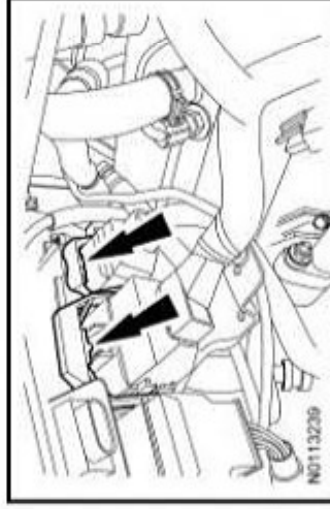




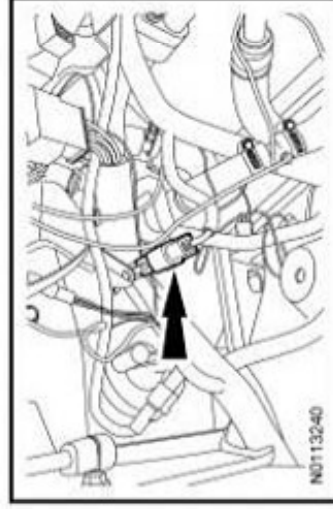
37. Disconnect the 5 electrical connectors.



38. Disconnect the 2 PCM electrical connectors and wiring harness retainers.



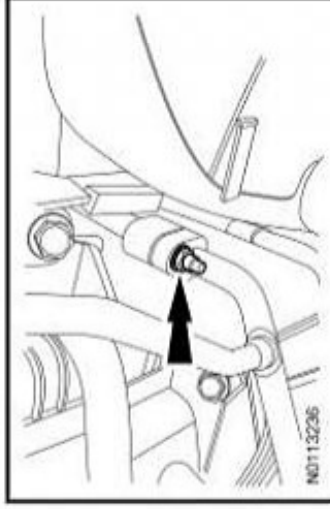
39. Disconnect the electrical connector.



40. Release the RH battery cable retainer.



41. 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.
  - To install, tighten to 15 Nm (133 lb-in).



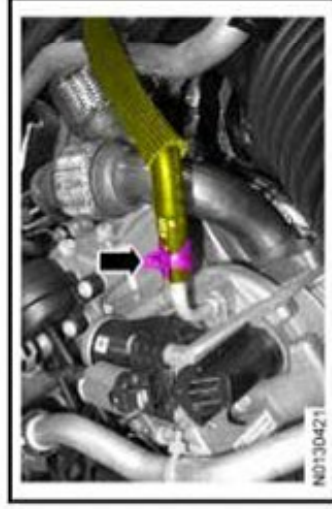
42. Disconnect the heater core hose-to-engine.
  - Release the clamp and disconnect the upper hose.
  - Release the quick disconnect and disconnect the heater core hose-to-engine.



43. Disconnect the 2 EGR cooler lines from cooler.
  - Release retainers and position aside the hoses.



44. Disconnect the EGR valve coolant vent hose.



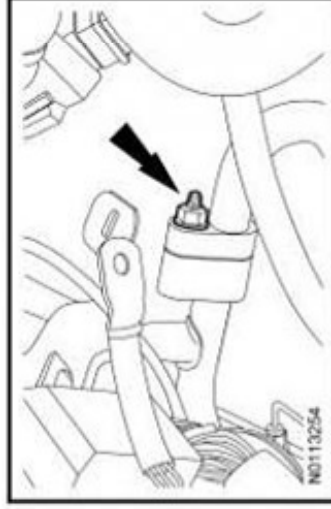
45. Position a suitable drain pan under the coolant hoses at the water pump.
46. Disconnect the upper and lower coolant hoses at the water pump and allow to drain.
  - Release the spring clips on each coolant hose.
  - Disconnect the coolant hoses.



47. Disconnect the transmission secondary coolant outlet hose at the reservoir.



48. Remove the nut and disconnect the A/C evaporator-to-compressor suction line fitting.
  - Discard the O-rings and cap off the fittings.
  - To install, tighten to 15 Nm (133 lb-in).

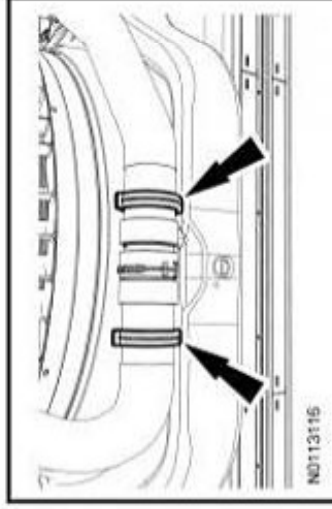


49. Remove the 3 deflector pushpins from the front bumper.

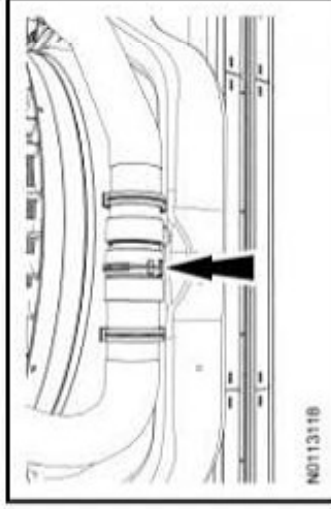
50. If equipped, disconnect the fog lamps.
51. Disconnect the lower power steering cooler hose and remove from hose retainer.



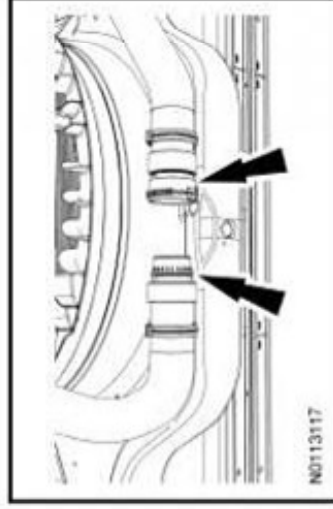
52. Detach the radiator hose from the lower radiator support.



53. Position a suitable drain pan under the radiator hose and release the radiator hose coupling locking clip.



54. Disconnect the radiator hose coupling and allow the coolant to drain.

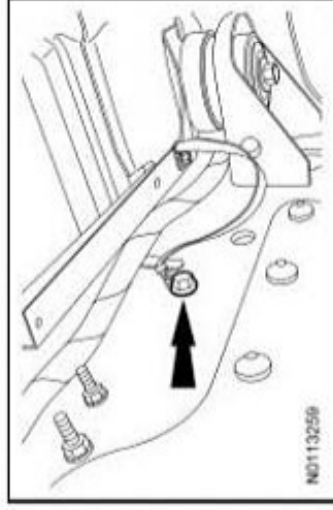


55. Disconnect the hose from the transmission cooler.

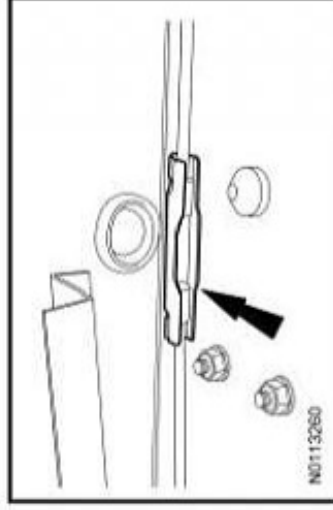




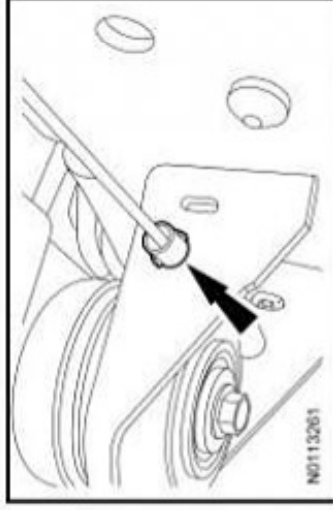
56. Remove the bolt and position the body ground strap aside.
- To install, tighten to 25 Nm (18 lb-ft).



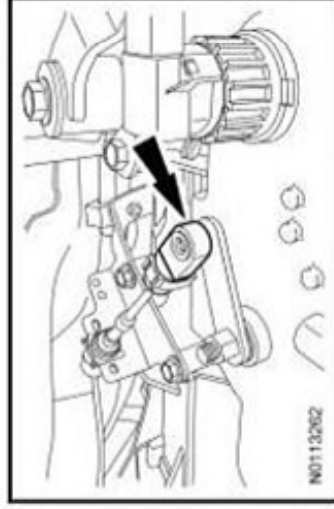
57. Separate the parking brake cable at the cable union.



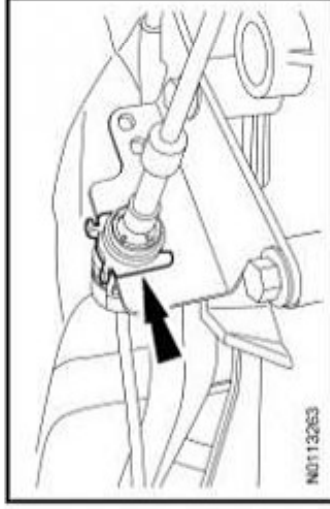
58. Release the parking brake cable retainer and route the front parking brake cable out of the frame.



59. Disconnect the transmission selector linkage.



60. Remove the transmission selector linkage locking clip and position the linkage aside.



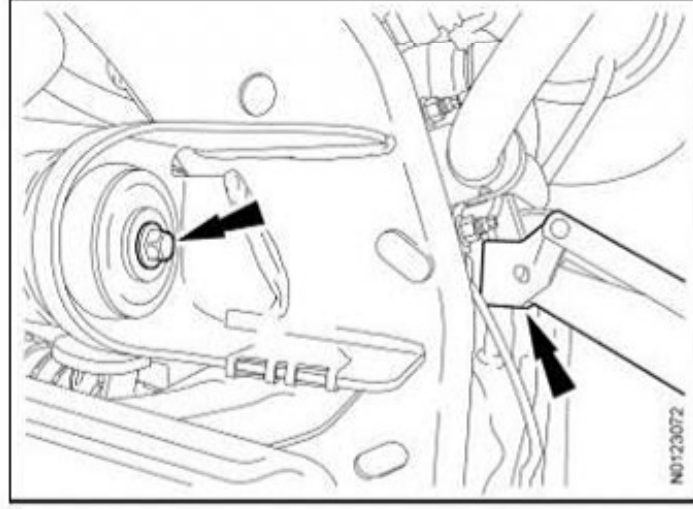
61. **NOTE:** LH shown, RH similar.

**NOTE:** Make sure the insulator is removed with the body bolt.

**NOTE:** If the captured cage nut spins, refer to [Spun Cab Retainer Cage Nut — 6.7L Diesel](#).

Remove the Front End Sheet Metal (FESM) body mount bolts.

- Position a floor jack on the **FESM** core support and apply pressure to cage nuts to prevent spinning during removal.
- Remove the **FESM** bolts using an impact wrench.
- To install, tighten to 103 Nm (76 lb-ft).



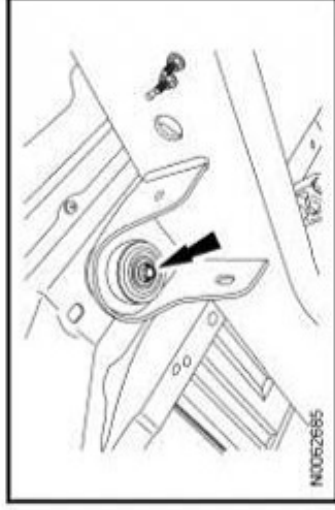
62. **NOTE:** LH shown, RH similar.

**NOTE:** Make sure the insulator is removed with the bolt.

**NOTE:** If the captured cage nut spins, refer to [Spun Cab Retainer Cage Nut — 6.7L Diesel](#).

Remove the remaining body mounting bolts with an impact wrench starting with the rear bolts.

- To install, tighten to 103 Nm (76 lb-ft).



63. If equipped, disconnect the running boards electrical connectors.

64. Place several fender covers between the cab and the pickup bed.

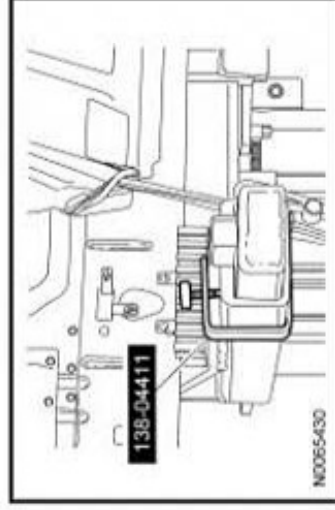
65. **NOTE:** Mark the position of the tires to aid in aligning the cab to the chassis.

Mark the position of the tires on the floor.

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

Position equally side-to-side the hoist lift pads below the pinch welds at the furthest most possible front and rear positions.

67. Using the Universal Cab Hold-Down Strap, secure the vehicle to the hoist.



68. **NOTICE:** Prior to raising cab on 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.

69. **NOTICE:** Prior to lowering cab on lift, verify that the steering shaft is clear of obstruction and has been positioned aside to prevent damage to shaft assembly.

To install, reverse the removal procedure.

- Align the tires to the marks on the floor.
- With the aide of an assistant in alignment, lower the body on the chassis.

- Install new bolts for all discarded.
  - Prior to reusing the body support mounting bolts, use a wire wheel to clean all threadlock material from the threads.
  - Apply threadlock and sealer to the threads of all body support mounting bolts prior to installation.
  - Install new o-ring seals for all discarded.
  - If installing a new engine or short block, fill both cooling systems with new coolant. In these circumstances, flushing the engine and cooling system is not necessary. For additional information, refer to [Section 303-03B](#) and [Section 303-03C](#).
  - Top off the fluids.
  - Evacuate and recharge the A/C system. For additional information, [Section 412-00](#).
  - Connect all disconnected electrical connectors.
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