

## 2012 Silverado 4WD

## Applies to:

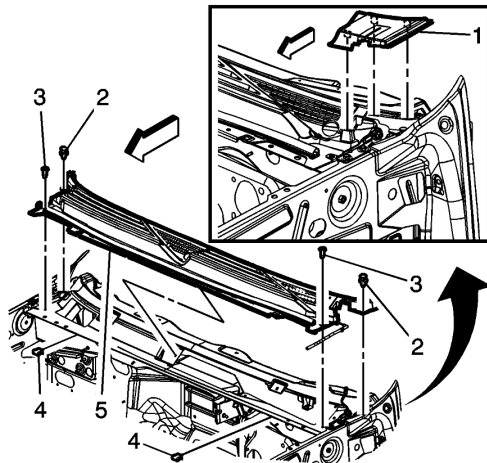
6.6L (LGH, LML)

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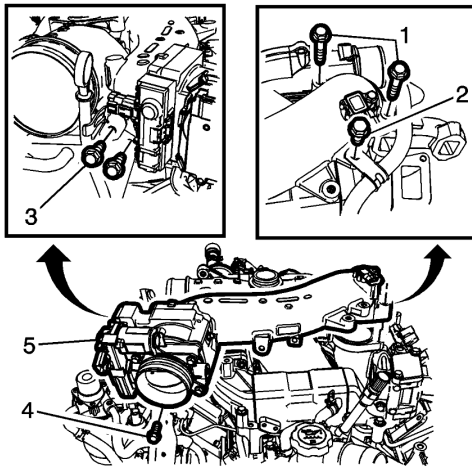
## Special Tools

- *J 38185* Hose Clamp Pliers
- *EN-49397* Lift Bracket

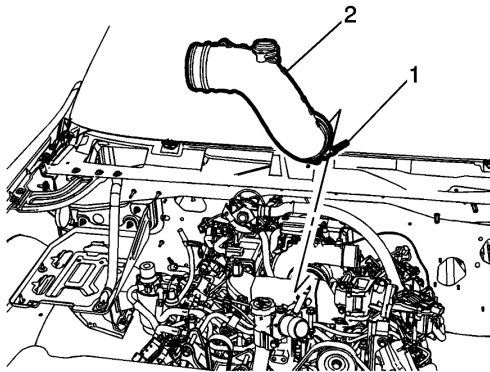
For equivalent regional tools, refer to [Special Tools](#)

[Removal Procedure](#)

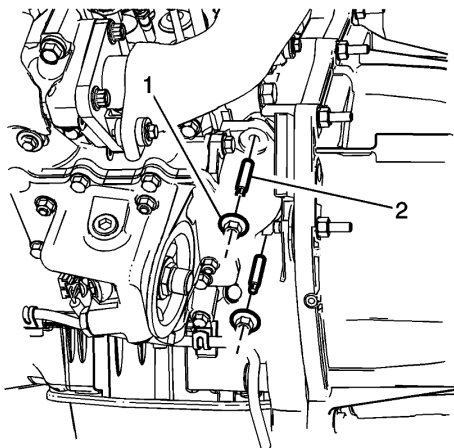
1. Remove the air inlet grille (1). Refer to [Air Inlet Grille Panel Replacement](#).
2. Place hood in service position.
3. Disconnect the battery negative cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
4. Drain the cooling system. Refer to [Cooling System Draining and Filling](#).
5. Drain the engine oil. Refer to [Engine Oil and Oil Filter Replacement](#).
6. Recover the A/C refrigerant. Refer to [Refrigerant Recovery and Recharging](#).



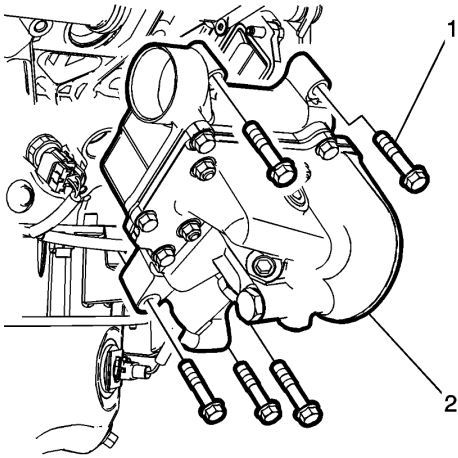
7. Remove the intake manifold tube (5). Refer to [Intake Manifold Tube Replacement](#).
8. Remove the EGR cooler. Refer to [Exhaust Gas Recirculation Valve Cooler Replacement](#).



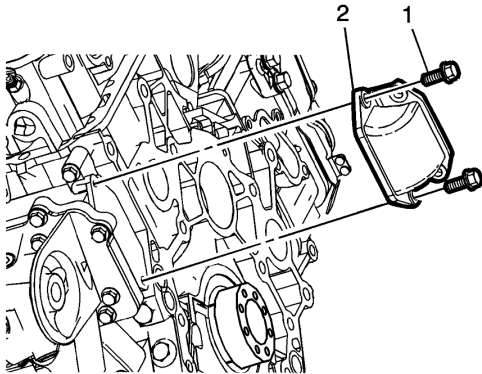
9. Remove the turbocharger air inlet adapter (2) . Refer to [Turbocharger Air Inlet Adapter Replacement](#).
10. Remove the water pump outlet pipe bolts. Refer to [Water Pump Outlet Pipe Replacement](#).



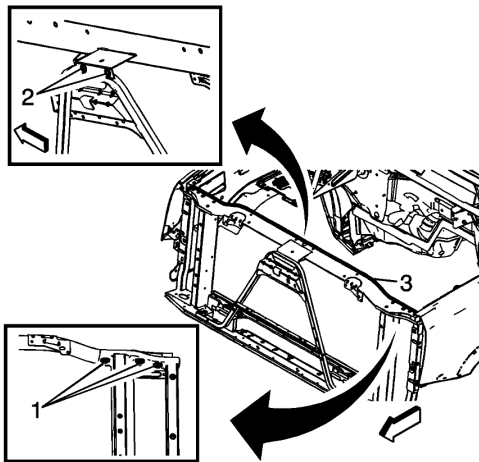
11. Remove the oil cooler adapter nuts (1) and studs (2).



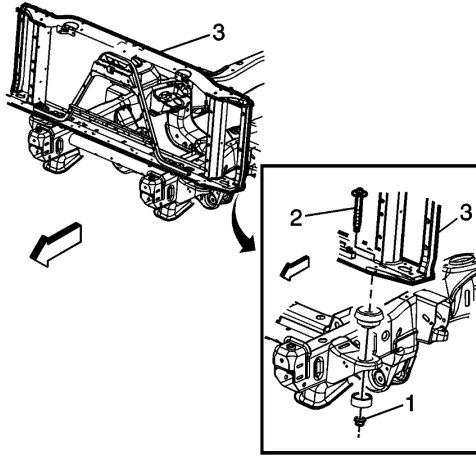
12. Remove the oil cooler bolts (1) and assembly (2).



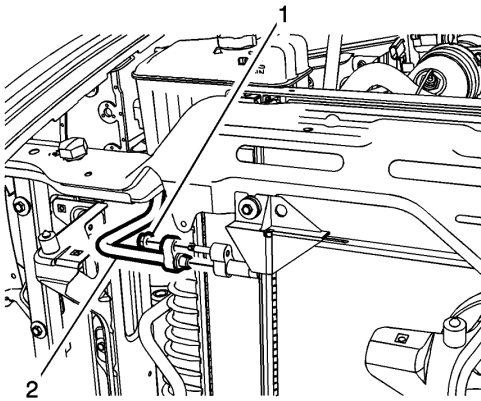
13. Remove the oil cooler adapter bolts (1) and adapter (2).



14. Remove the upper tie bar (3). Refer to [Front End Upper Tie Bar Replacement](#).

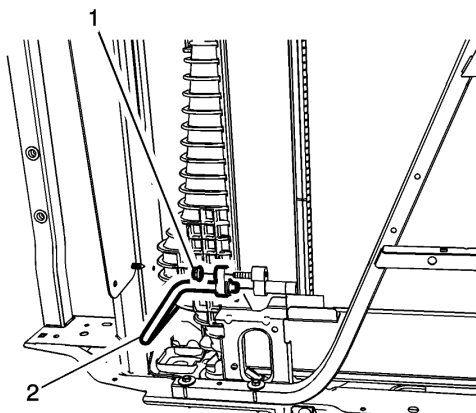


15. Remove radiator support bolts (3). Access the bolts from the rear of the upper radiator support.



16. Remove the compressor discharge hose nut (1) from the condenser.

17. Disconnect the compressor discharge hose (2) from the condenser.



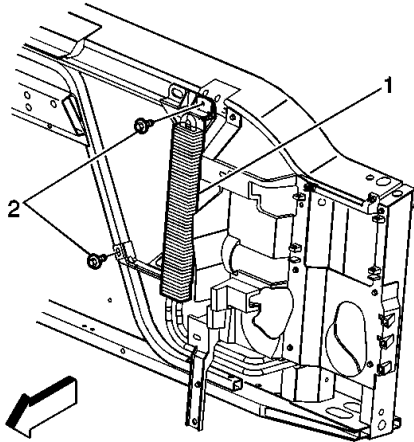
18. Remove the evaporator tube nut (1) from the condenser.

19. Disconnect the evaporator tube (2) from the condenser.

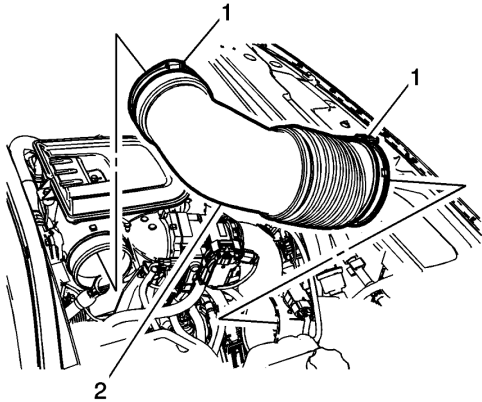
20. Remove the insulator retainer bolts and the upper insulator retainers.

21. Remove the condenser from the vehicle.

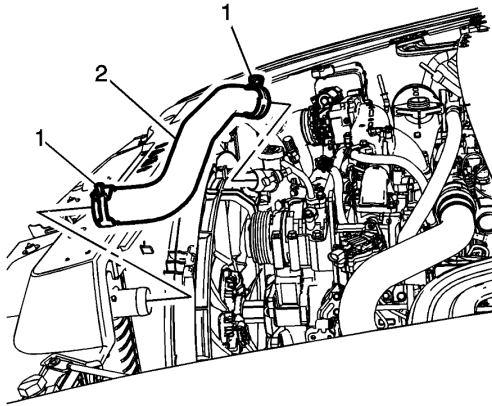
22. Remove the transmission fluid auxiliary cooler. Refer to [Transmission Fluid Auxiliary Cooler Replacement](#).
23. Remove the charge air cooler. Refer to [Charge Air Cooler Replacement](#).
24. Remove the radiator. Refer to [Radiator Replacement](#).



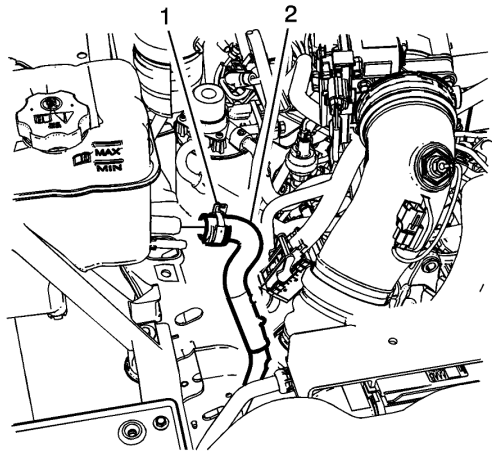
25. Remove the power steering fluid cooler bolts (2).
26. Remove the power steering fluid cooler (1). Refer to [Power Steering Fluid Cooler Replacement](#).
27. Remove the transmission control module. Refer [Transmission Control Module Replacement](#).
28. Remove the ECM. Refer to [Engine Control Module Replacement](#).



29. Remove the air cleaner outlet duct (2). Refer to [Air Cleaner Outlet Duct Replacement](#).

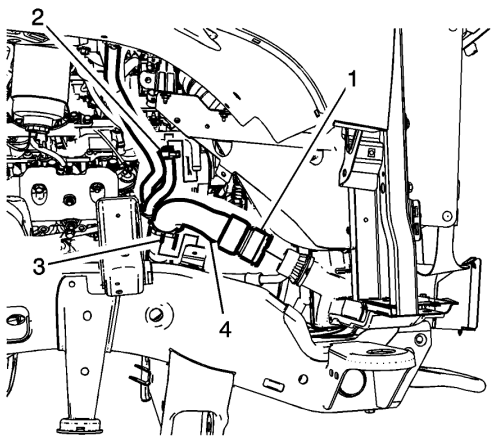


30. Remove the radiator inlet hose (2). Refer to [Radiator Inlet Hose Replacement](#).



31. Reposition the radiator outlet hose clamp (1) at the surge tank using *J-8185* Hose Clamp Pliers.

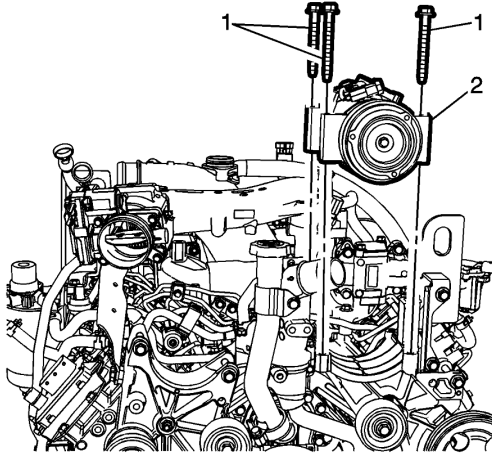
32. Remove the radiator outlet hose (2) from the surge tank.



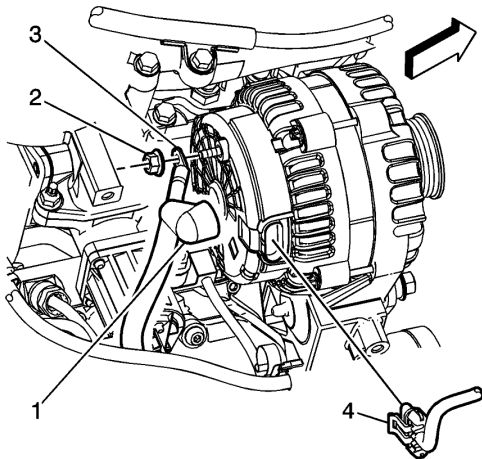
33. Disconnect the quick connect (1) at the radiator.

34. Reposition the radiator outlet hose clamp (2) at the heater outlet hose using *J-38185* Hose Clamp Pliers.

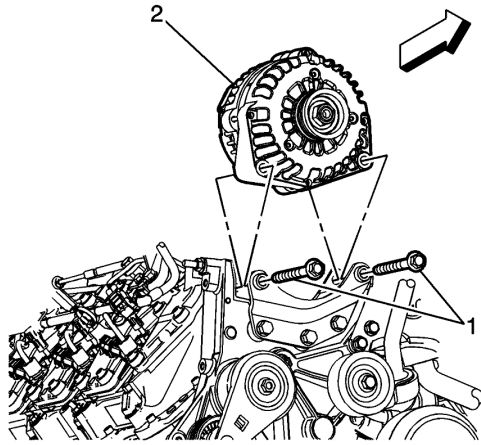
35. Remove the radiator outlet hose clip retainers (3) from the brackets.
36. Remove the radiator outlet hose (4) from the radiator.
37. Remove the radiator outlet hose clamp (1) from the engine.
38. Remove the radiator outlet hose clip retainers (2) from the engine shield.
39. Remove the radiator outlet hose (3). Refer to [Radiator Outlet Hose Replacement](#).



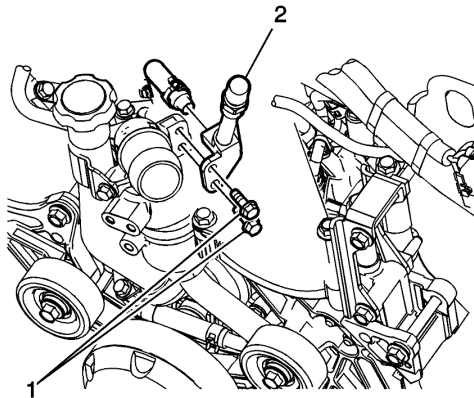
40. Remove the air conditioning compressor (2). Refer to [Air Conditioning Compressor Replacement](#).



41. Uncover the B+ terminal (2) by sliding away the protective boot (1).
42. Remove the generator B+ terminal nut (2) and the electrical connector (4).

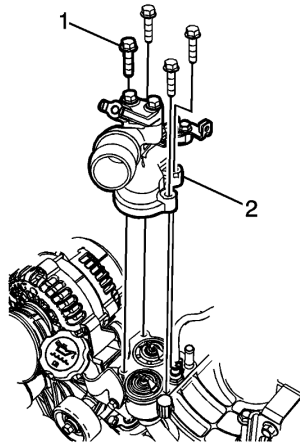


43. Remove the generator bolts (1) and generator (2) from the generator bracket.
44. If equipped remove the auxiliary generator. Refer to [Auxiliary Generator Replacement](#).
45. Reposition the power steering pump. Refer to [Power Steering Pump Replacement](#).
46. Disconnect the heater inlet hose. Refer to [Heater Inlet Hose Replacement](#).
47. Disconnect the heater outlet hose. Refer [Heater Outlet Hose Replacement](#).
48. Disconnect all necessary electrical connections.
49. Remove all ground bolts and wires.
50. Remove the ground strap.

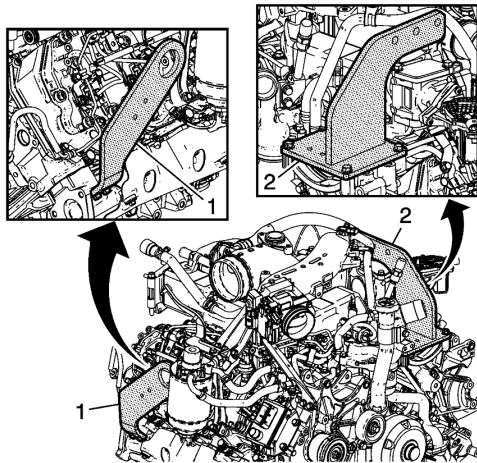


51. Remove the fuel pressure valve bracket bolts (1) and reposition the fuel pressure valve (2).

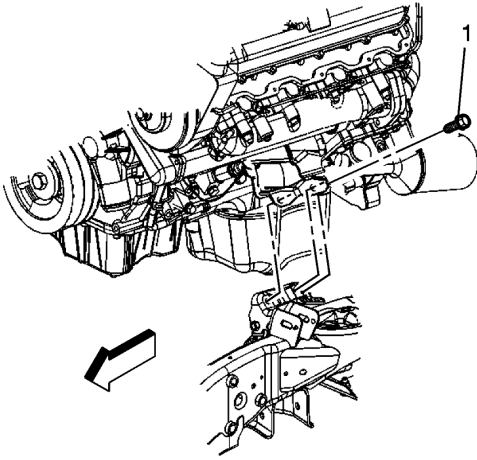




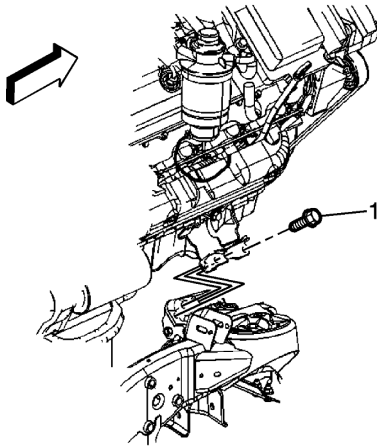
52. Remove the thermostat bolts (1) from the engine coolant outlet pipe (2) and remove housing.
53. Remove the transmission cooler line retainer bracket on the right side of oil pan and reposition lines.
54. Disconnect fuel feed and return lines.
55. Remove the drivetrain and front suspension frame front crossmember. Refer [Drivetrain and Front Suspension Frame Front Crossmember Replacement](#).
56. If equipped, remove the front differential carrier assembly. Refer to [Differential Carrier Assembly Replacement](#).
57. Remove the transmission. Refer to [Transmission Replacement](#).



58. Install *EN-4939* bracket(1) to the right side exhaust manifold.
59. Install *EN-49397* bracket(2) to the power steering pump mounting bracket.
60. Attach engine lift device with chains to the engine lift brackets.



61. Remove the left side engine mount bolt (1). Refer to [Engine Mount Replacement - Left Side](#).



62. Remove the right side engine mount bolt (1). Refer to [Engine Mount Replacement - Right Side](#).

63. Remove the engine from vehicle.

**Caution:** When replacing a failed engine, clean any engine oil that may have collected in the charge air cooler before installing the new engine. The failure to clean excessive oil from the charge air cooler may cause an engine runaway condition on start up. Engine runaway may result in severe engine damage.

64. In order to secure the engine to an engine stand remove the following and follow the special procedures:

- Refer to [Engine Flywheel Removal](#).
- Refer to [Exhaust Turbocharger Outlet Pipe Adapter Removal](#).
- Refer to [Upper Oil Pan Removal](#).
- Refer to [Flywheel Housing Removal](#).
- Refer to [Engine Mounting to Stand](#).

### [Installation Procedure](#)

1. Remove the engine from the stand. Refer to [Engine Removal from Stand](#).
2. Install the following: