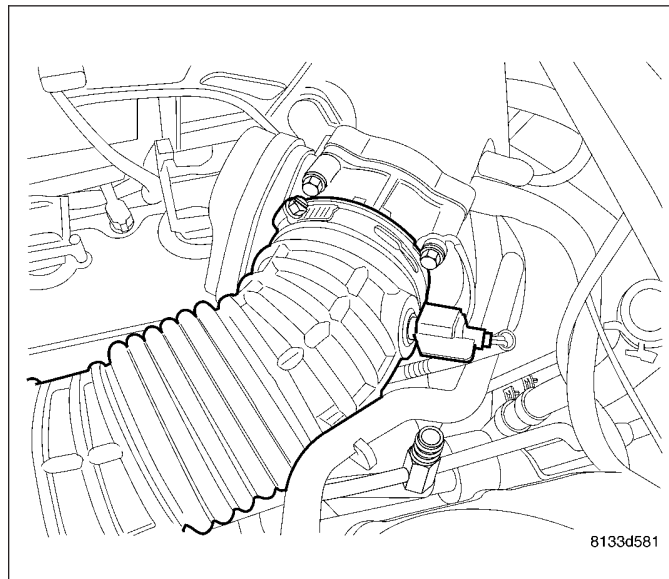


## MANIFOLD - INTAKE

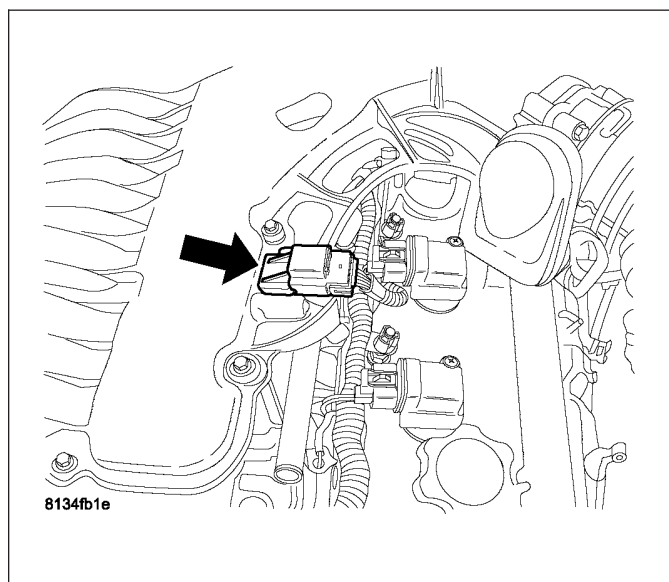
### REMOVAL

#### UPPER INTAKE MANIFOLD

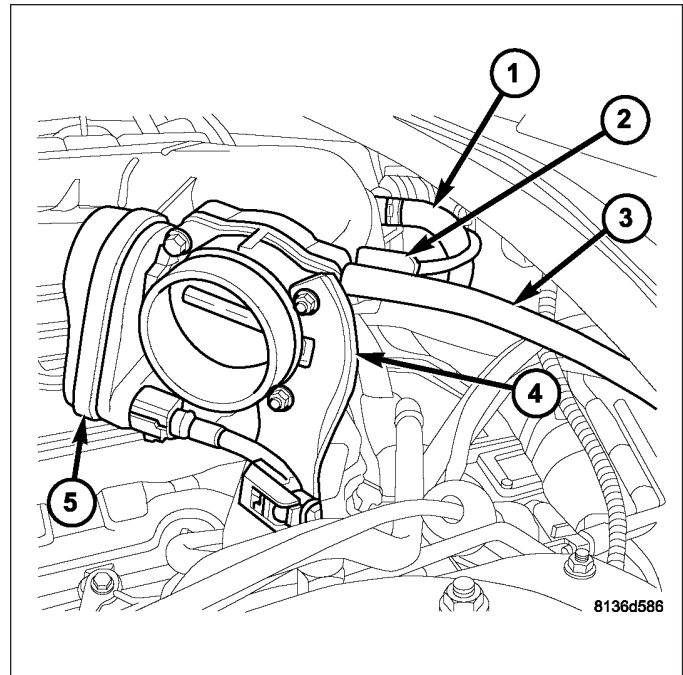
1. Disconnect negative battery cable.
2. Disconnect the IAT sensor electrical connector.
3. Remove air inlet hose from the throttle body.



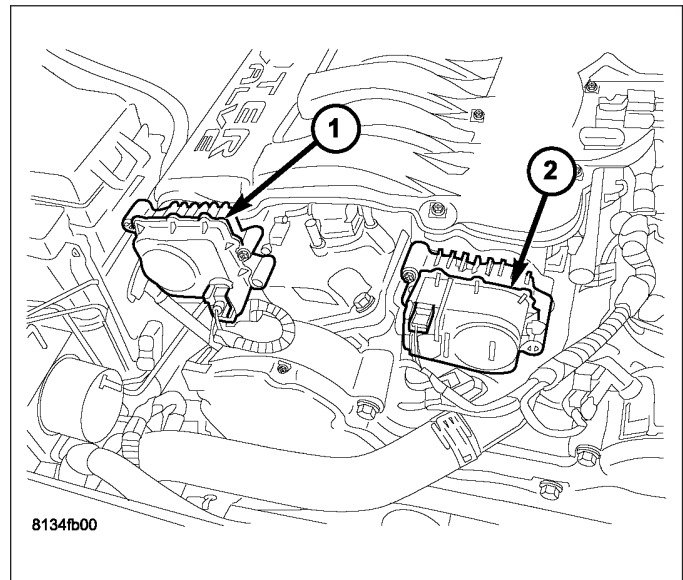
4. Disconnect the MAP sensor electrical connector.



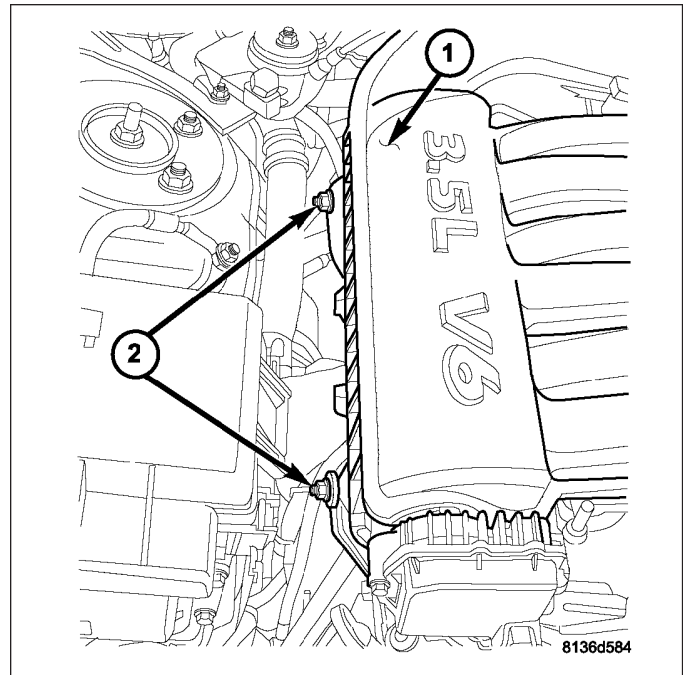
5. Separate the engine electrical harness connectors from the intake manifold.
6. Disconnect the EGR tube, PCV, Purge and power brake booster vacuum hoses from the upper intake manifold.
7. Disconnect the electronic throttle control electrical connector.
8. Remove the throttle bracket (4) fasteners from the throttle body and cylinder head.



9. Disconnect electrical connectors from the Manifold Tuning Valve (MTV) and Short Runner Valve.



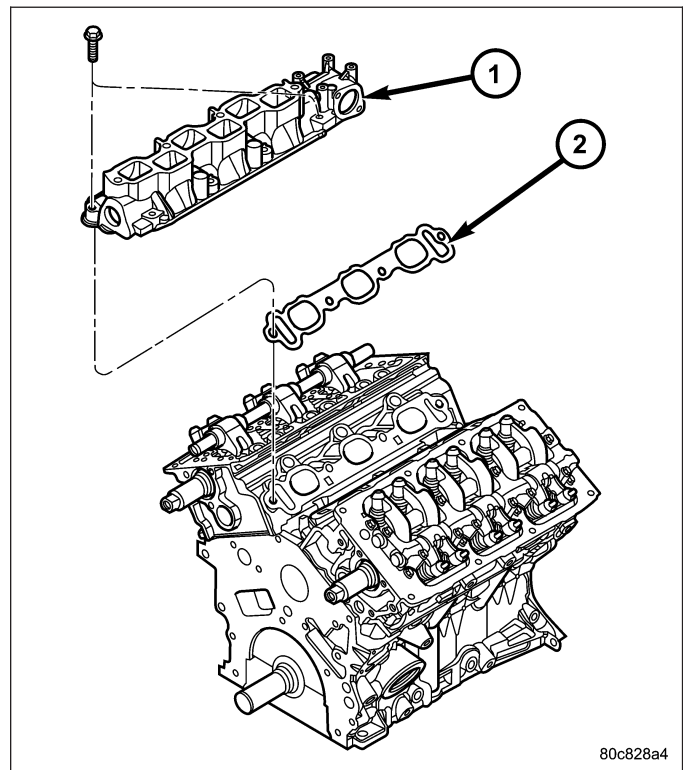
10. Remove the right intake manifold support brackets.



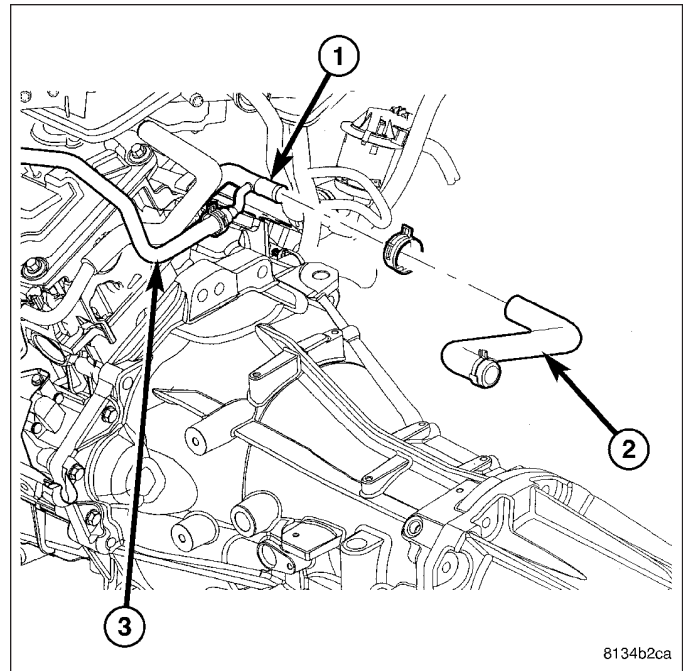
11. Remove the upper intake manifold retaining bolts, insulation foam pad and manifold. Clean all gasket sealing surfaces.

## LOWER INTAKE MANIFOLD

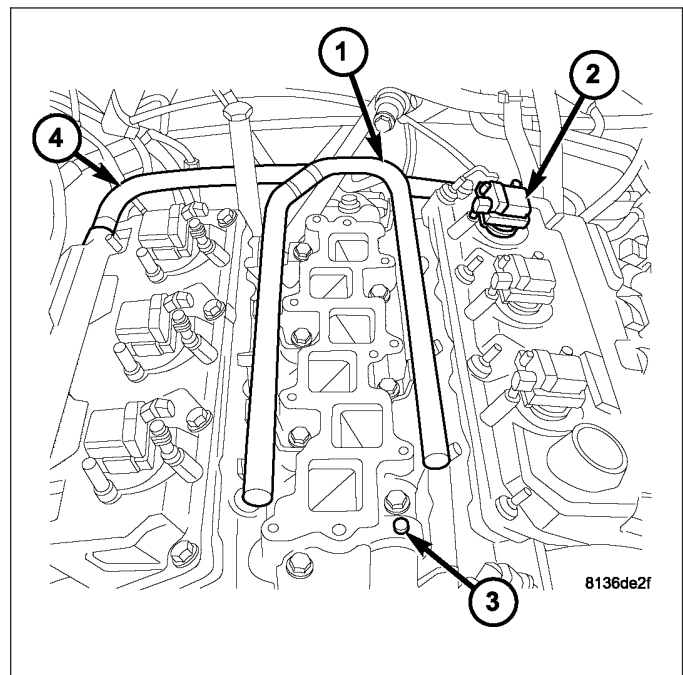
1. Perform fuel pressure release procedure. (Refer to 14 - FUEL SYSTEM/FUEL DELIVERY - STANDARD PROCEDURE)
2. Drain the cooling system (Refer to 7 - COOLING/ENGINE/COOLANT - STANDARD PROCEDURE).
3. Disconnect the upper radiator hose from the thermostat housing.
4. Remove the upper intake manifold (Refer to 9 - ENGINE/MANIFOLDS/INTAKE MANIFOLD - REMOVAL).
5. Reposition power steering fluid reservoir and bracket.
6. Disconnect the electrical connectors to fuel injectors and coolant temperature sensor.



7. Disconnect heater hose from the rear intake manifold.
8. Disconnect the coolant container hose at the rear intake manifold.



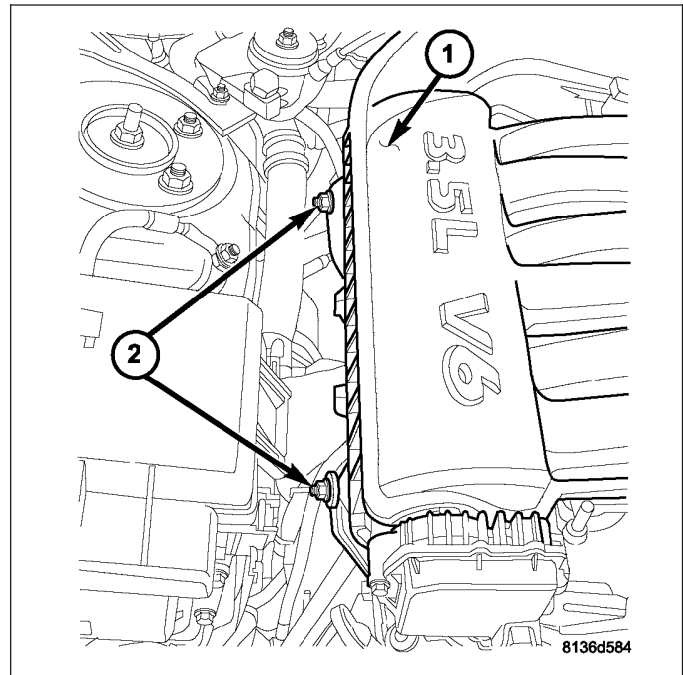
9. Disconnect the fuel supply hose from fuel rail (Refer to 14 - FUEL SYSTEM/FUEL DELIVERY/FUEL LINES - STANDARD PROCEDURE).
10. Remove the bolts attaching fuel rail.
11. Remove fuel rail and injectors as an assembly.
12. Remove bolts attaching lower intake and remove intake manifold.



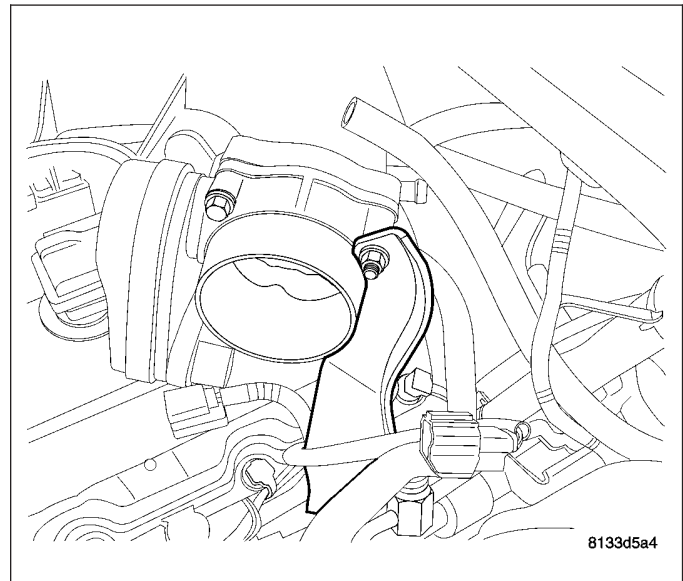
## INSTALLATION

### UPPER INTAKE MANIFOLD

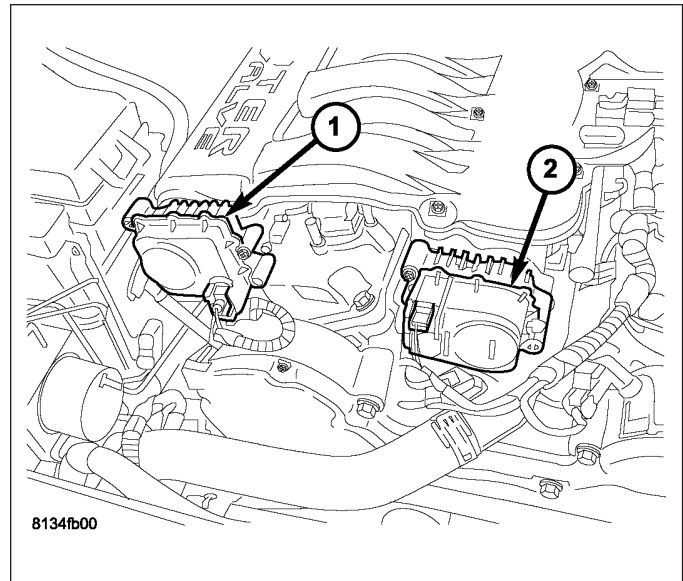
1. Clean and inspect gasket sealing surfaces.
2. Position new gasket.
3. Install the upper intake manifold insulator foam.
4. Install the upper intake manifold. Tighten bolts to 12 N·m (105 in.lbs.) starting in the center working outward in a cross sequence pattern.
5. Install the right manifold support brackets. Tighten fasteners to 12 N·m (105 in.lbs.).



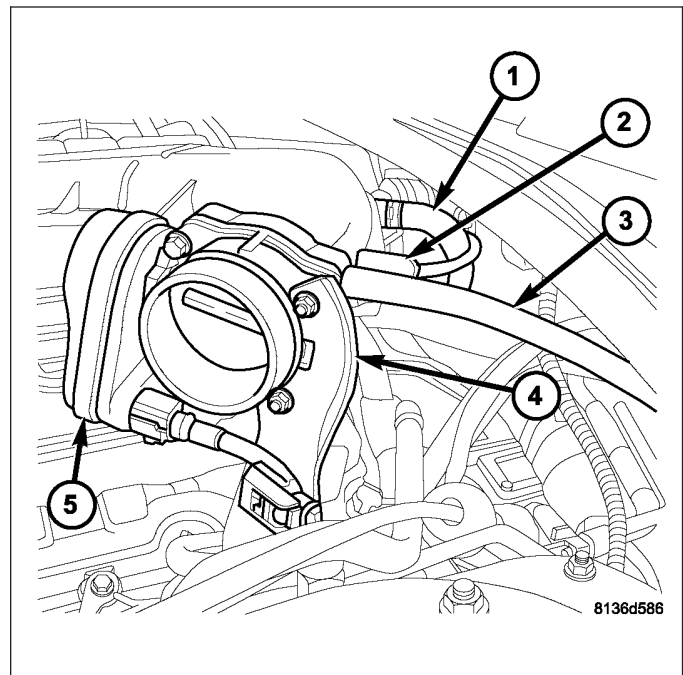
6. Install the throttle bracket. Tighten fasteners to 12 N·m (105 in.lbs.) at the throttle body and 28N·m (259 in.lbs.) at the cylinder head.



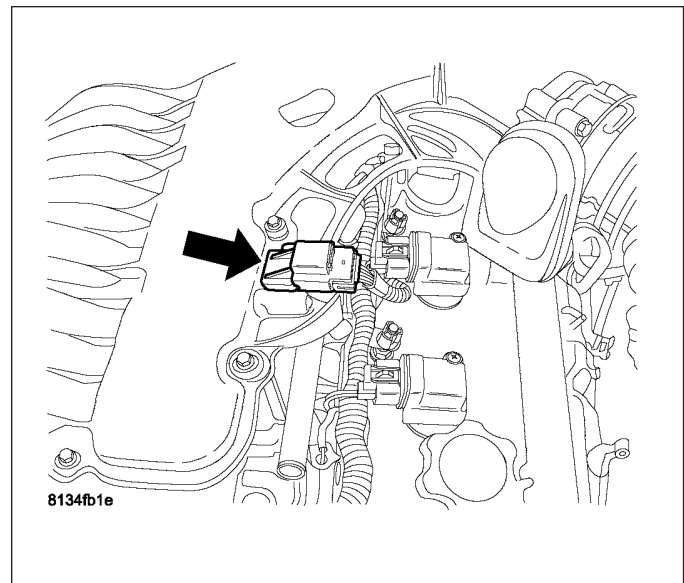
7. Connect the manifold tuning valve and short runner valve electrical connectors.



8. Connect the electronic throttle control harness connector.
9. Connect the engine electrical connectors to the intake manifold.
10. Connect the EGR tube, PCV, Purge and power brake booster vacuum hoses to the intake manifold.

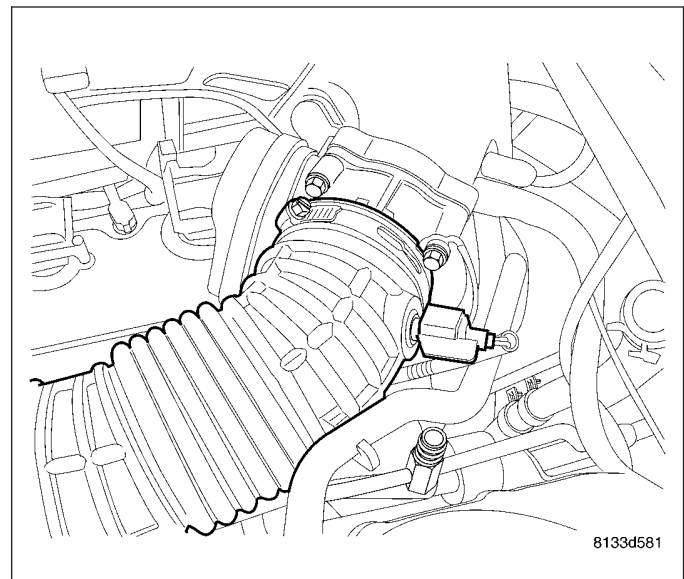


11. Connect the MAP sensor harness connector.



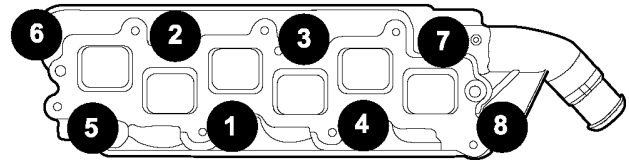
12. Install the inlet hose and connect the IAT sensor harness connector.

13. Connect negative battery cable.



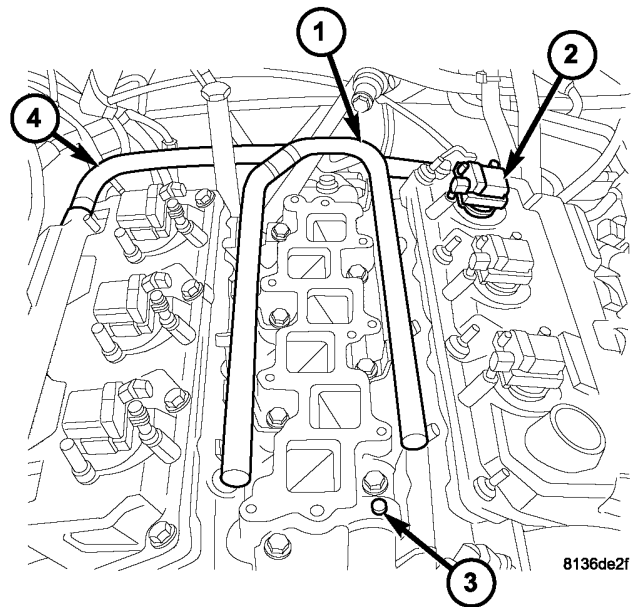
## LOWER INTAKE MANIFOLD

1. Clean all sealing surfaces.
2. Position new gaskets and intake manifold on cylinder head surfaces.
3. Install intake manifold bolts and gradually tighten in sequence shown until a torque of 28 N·m (250 in. lbs.) is obtained.



813bcd11

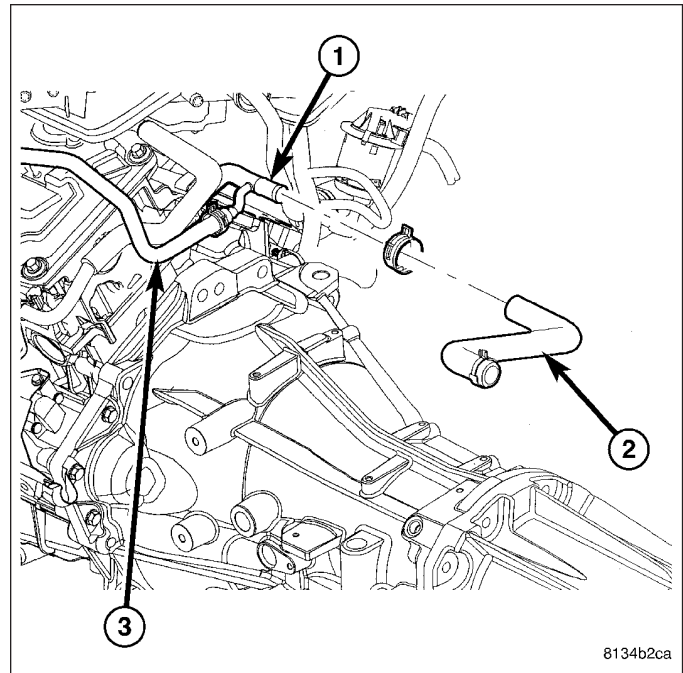
4. Install fuel rail and injectors as an assembly, (Refer to 14 - FUEL SYSTEM/FUEL INJECTION/FUEL INJECTOR - INSTALLATION).
5. Connect fuel supply hose to fuel rail. (Refer to 14 - FUEL SYSTEM/FUEL DELIVERY/FUEL LINES - STANDARD PROCEDURE)



8136de2f



6. Connect heater hose to rear lower intake manifold.
7. Connect coolant container hose to the rear lower intake manifold.



8. Connect electrical connectors to fuel injectors and coolant temperature sensor.
9. Install power steering fluid reservoir and bracket.
10. Install upper intake manifold (Refer to 9 - ENGINE/MANIFOLDS/INTAKE MANIFOLD - INSTALLATION).
11. Connect the upper radiator hose to the thermostat housing.
12. Fill the cooling system (Refer to 7 - COOLING/ENGINE/COOLANT - STANDARD PROCEDURE).