

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Accessory Wiring Junction Block Nut	22 N·m	16 lb ft
Air Conditioning Liquid Line Clamp Bolt	9 N·m	80 lb in
Battery Cover Screw	1.6 N·m	14 lb in
Battery Hold Down Bolt	25 N·m	18 lb ft
Battery Negative Cable Extension Cable to Cylinder Head Bolt	58 N·m	43 lb ft
Battery Negative Cable Extension Cable to Left Wheelhouse Panel Upper Reinforcement Bolt	58 N·m	43 lb ft
Battery Positive Junction Block Cable to Generator Nut	22 N·m	16 lb ft
Coolant Recovery Reservoir Bolt	5 N·m	44 lb in
Generator Bolt	50 N·m	37 lb ft
Negative Battery Cable Ground Bolt	25 N·m	18 lb ft
Negative Battery Cable Terminal Nut	9 N·m	80 lb in
Positive Battery Cable Terminal Nut	9 N·m	80 lb in
Starter Bolt	50 N·m	37 lb ft
Starter Heat Shield Bolt	7 N·m	62 lb in
Starter Solenoid BAT Terminal Nut	25 N·m	18 lb ft

[2009 Chevrolet Traverse](#) | [Acadia, Enclave, OUTLOOK, Traverse \(VIN R/V\) Service Manual](#) | [Engine](#) | [Engine Electrical](#) | [Specifications](#) | **Document ID: 1876548**

Battery Usage

Application	Specification
Cold Cranking Amperage (CCA)	730 A
Amp Hours	70 A/H
Reserve Capacity	100 Minutes
Replacement Model Number	48-7YR

[2009 Chevrolet Traverse](#) | [Acadia, Enclave, OUTLOOK, Traverse \(VIN R/V\) Service Manual](#) | [Engine](#) | [Engine Electrical](#) | [Specifications](#) | **Document ID: 1876549**

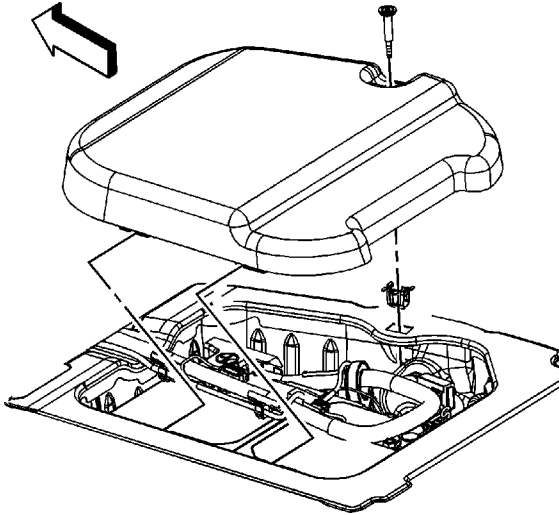
Generator Usage

Application	Specification
Generator Model	SC3
Rated Output	170 Amps
Load Test Output	119 Amps

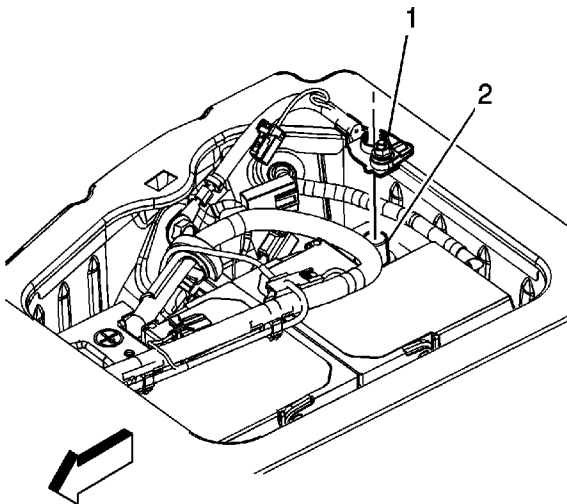
Battery Negative Cable Disconnection and Connection Removal Procedure

Warning: Refer to [Battery Disconnect Warning](#) in the Preface section.

1. Remove the floor matt from between the front and middle row passenger seat, if equipped.



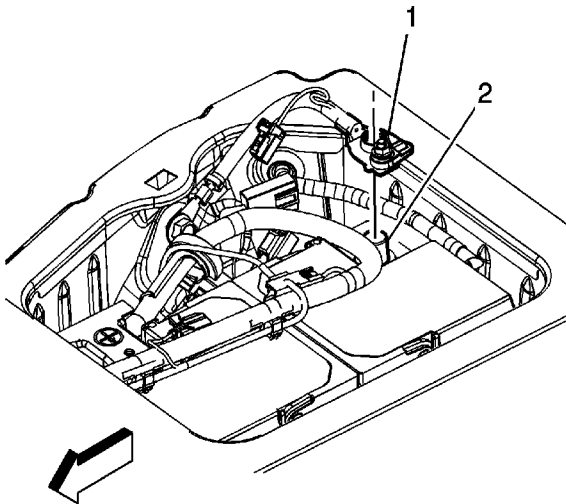
2. Record all of the customers radio station presets.
3. Turn OFF all the lamps and accessories.
4. Ensure the ignition switch is in the OFF position and the key is removed.
5. From inside the vehicle, remove the battery cover screw and cover.





6. Loosen the negative battery cable terminal (1) nut.
7. Remove the negative battery cable from the battery negative terminal (2).
8. Reposition the negative battery cable away from the battery negative terminal.

Installation Procedure



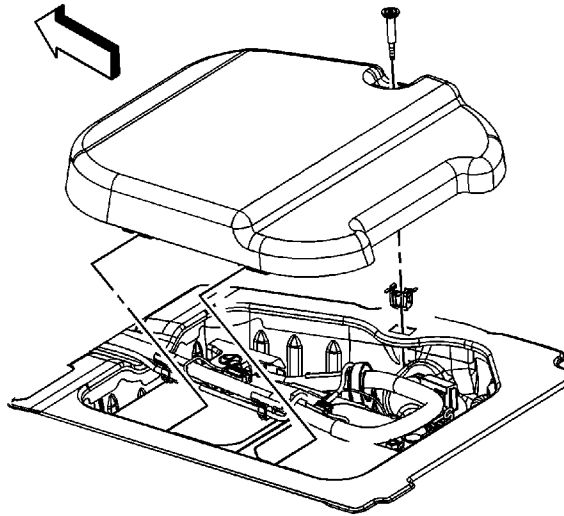
1. Position and install the negative battery cable to the battery negative terminal (2).

Caution: Refer to [Fastener Caution](#) in the Preface section.

2. Tighten the negative battery cable terminal (1) nut.

Tighten

Tighten the nut to 9 N·m (80 lb in).



3. Install the battery cover and screw.

Tighten

Tighten the screw to 1.6 N·m (14 lb in).

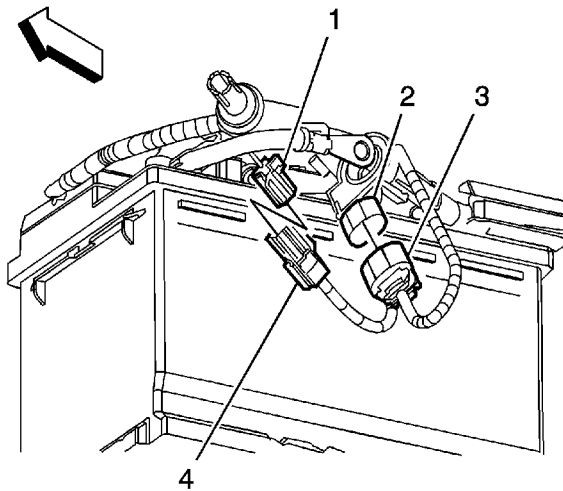
4. Reset all of the customers radio station presets.
5. Install the middle row floor matt, if equipped.

Battery Negative Cable Replacement

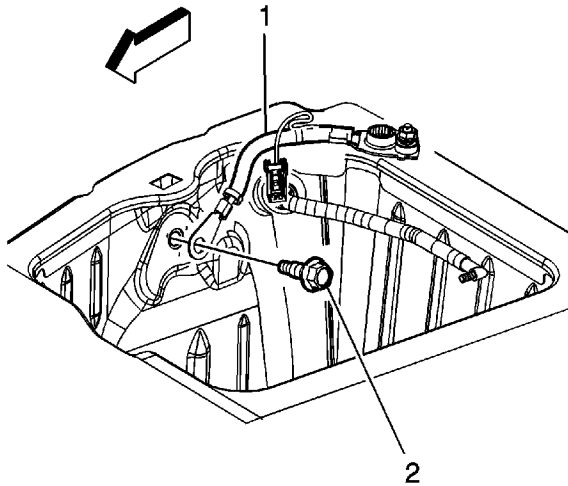
Removal Procedure

Note:

- Always use replacement cables that are of the same type, diameter and length of the cables that you are replacing.
- Always route the replacement cable the same way as the original cable.

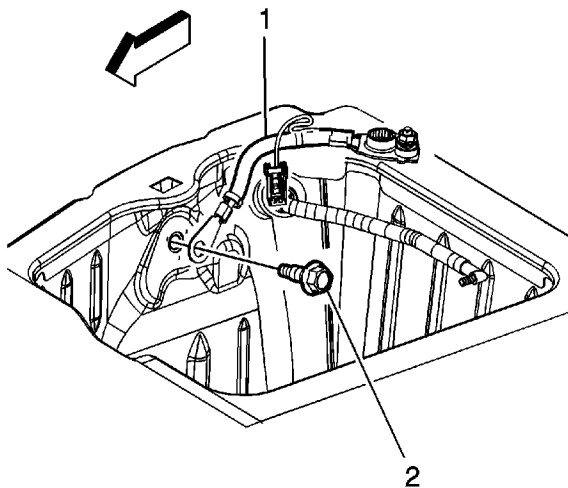


1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Disconnect the body wiring harness electrical connector (4) from the negative battery cable electrical connector (1).



3. Remove the negative battery cable ground bolt (2). (battery shown removed for clarity).
4. Remove the negative battery cable.

Installation Procedure



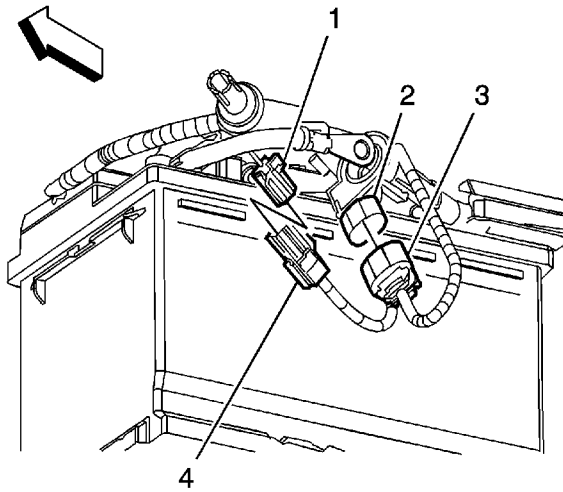
1. Position the negative battery cable to the battery box. (battery shown removed for clarity).

Caution: Refer to Fastener Caution in the Preface section.

2. Install the negative battery cable ground bolt (2).

Tighten

Tighten the bolt to 25 N·m (18 lb ft).



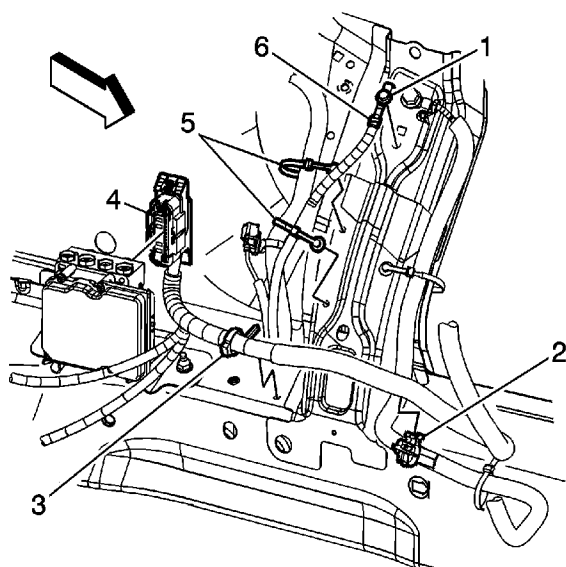
3. Connect the body wiring harness electrical connector (4) to the negative battery cable electrical connector (1).
4. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).

Battery Negative Cable Extension Cable Replacement

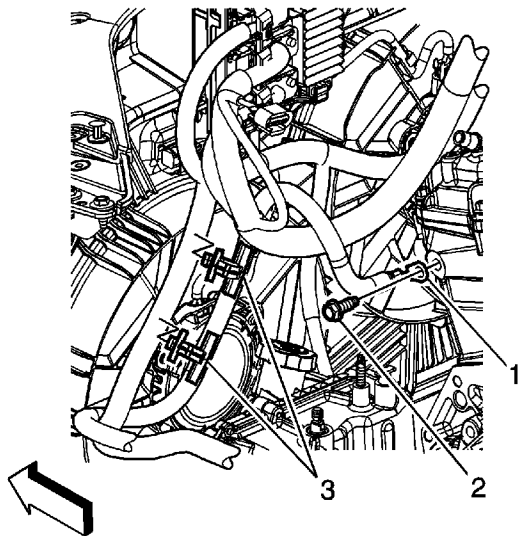
Removal Procedure

Note:

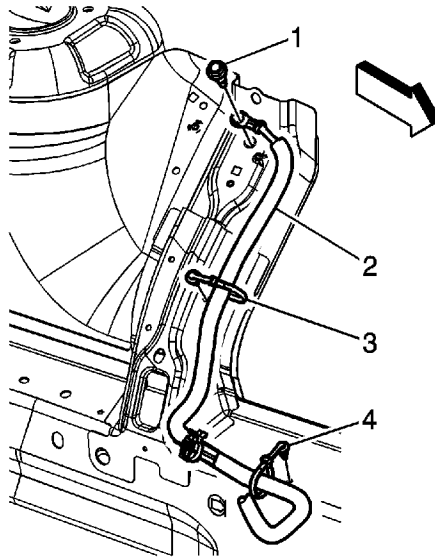
- Always use replacement cables that are of the same type, diameter and length of the cables that you are replacing.
- Always route the replacement cable the same way as the original cable.



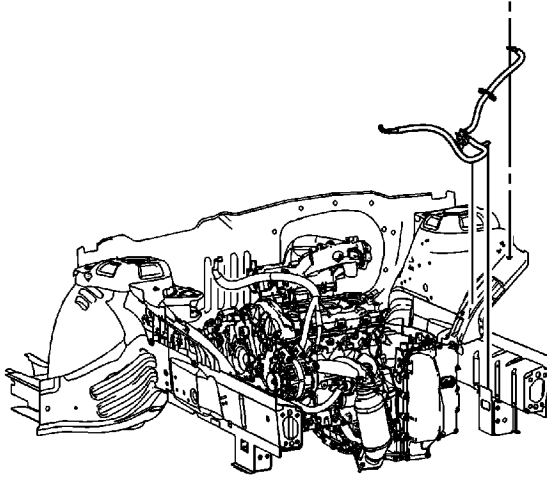
1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Remove the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#).
3. Remove the engine wiring harness from the battery negative cable extension cable clip (2).



4. Remove the battery negative cable extension cable ground bolt (2) from the cylinder head.
5. Reposition the battery negative cable extension cable terminal (1) from the cylinder head.

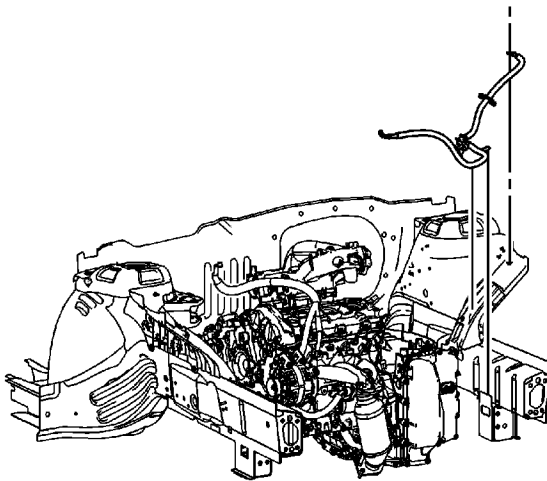


6. Remove the battery negative cable extension cable ground bolt (1) from the left wheelhouse panel upper reinforcement.
7. Remove the battery negative cable extension cable clip (3) from the left upper engine compartment support bracket.
8. Remove the battery negative cable extension cable clip (4) from the front compartment side rail.



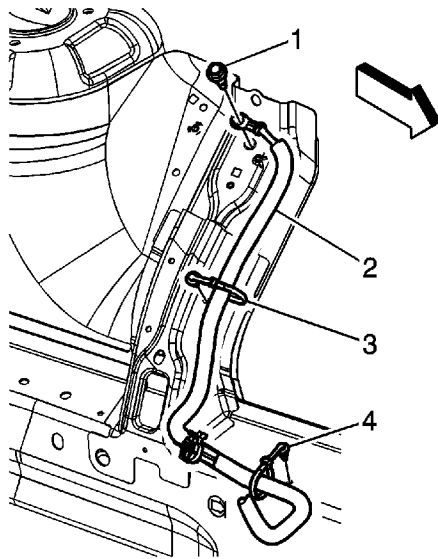
9. Remove the battery negative cable extension cable from the engine compartment.

Installation Procedure



1. Install the battery negative cable extension cable to the engine compartment.

Caution: Refer to Fastener Caution in the Preface section.

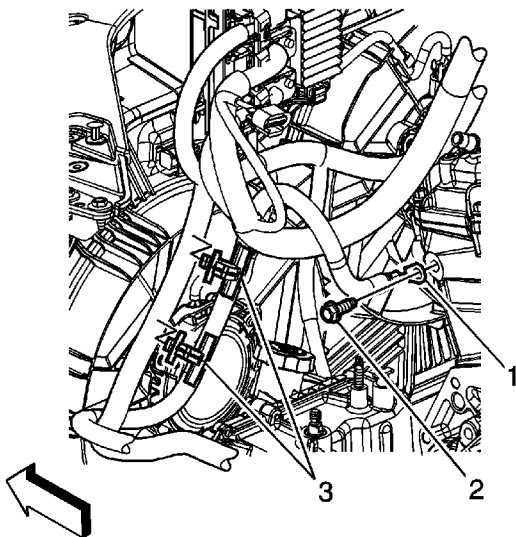


2. Install the battery negative cable extension cable ground bolt (1) to the left wheelhouse panel upper reinforcement.

Tighten

Tighten the bolt to 58 N·m (43 lb ft).

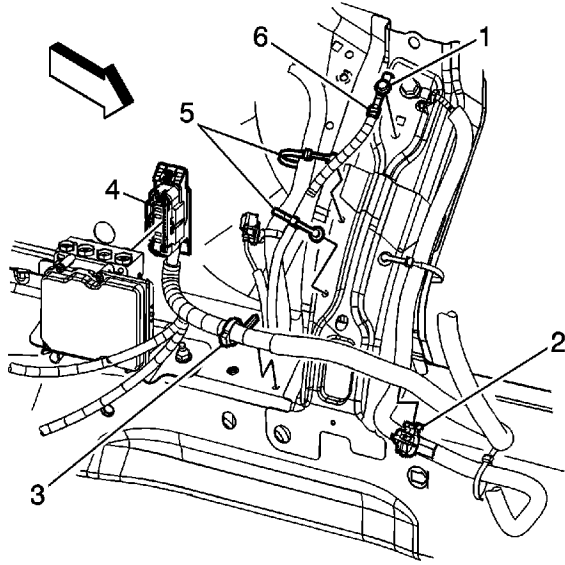
3. Install the battery negative cable extension cable clip (3) to the left upper engine compartment support bracket.
4. Install the battery negative cable extension cable clip (4) to the front compartment side rail.



5. Position the battery negative cable extension cable terminal (1) to the cylinder head.
6. Install the battery negative cable extension cable ground bolt (2) to the cylinder head.

Tighten

Tighten the bolt to 58 N·m (43 lb ft).



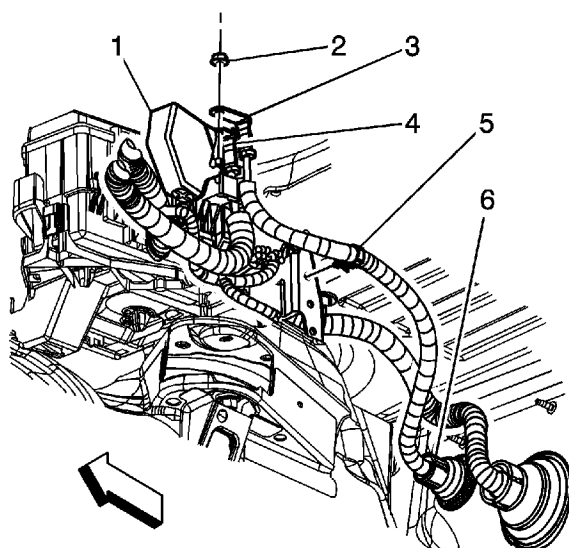
7. Install the engine wiring harness to the battery negative cable extension cable clip (2).
8. Install the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#).
9. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).

Battery Positive Cable Replacement

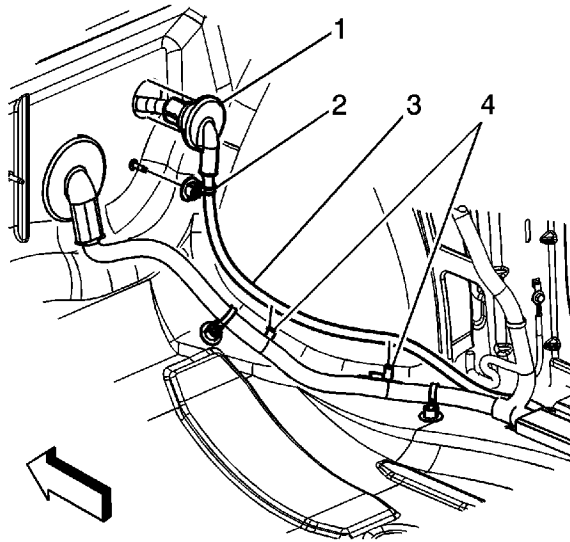
Removal Procedure

Note:

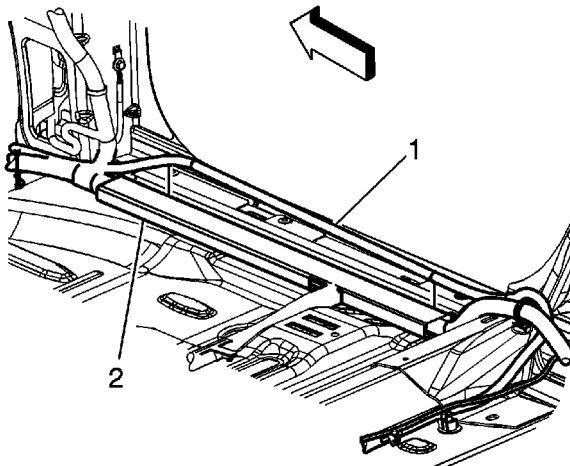
- Always use replacement cables that are of the same type, diameter and length of the cables that you are replacing.
- Always route the replacement cable the same way as the original cable.



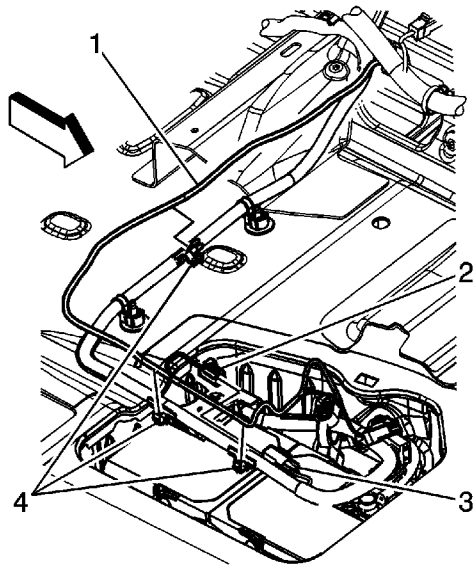
1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Remove the fuel injector sight shield. Refer to [Fuel Injector Sight Shield Replacement](#).
3. Open the accessory wiring junction block cover (1).
4. Remove the accessory wiring junction block nut (2).
5. Remove the positive battery cable terminal (3) from the stud.
6. Remove the positive battery cable clip (5) from the multiuse relay bracket.
7. Push the positive battery cable grommet (6) in through the dash panel.



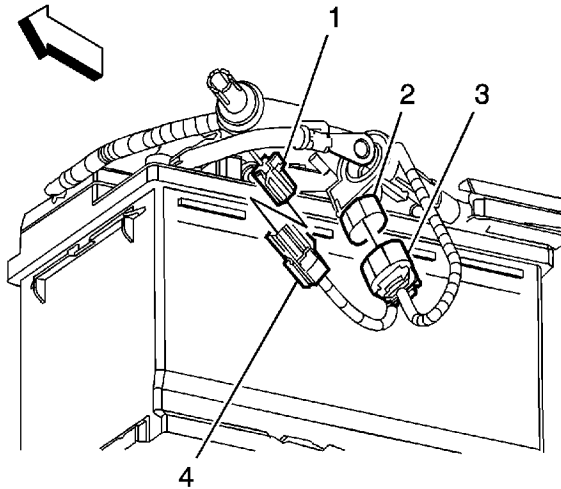
8. Remove the right side instrument panel insulator panel. Refer to [Instrument Panel Insulator Panel Replacement - Right Side](#).
9. Remove the passenger side carpet. Refer to [Front Floor Panel Carpet Replacement - Right Side](#).
10. Pull up the passenger side corner of the dash panel sound barrier until the positive battery cable is accessible.
11. Remove the positive battery cable clip (2) from the stud on the dash panel.
12. Pull the grommet (1) from the dash panel.
13. Remove the positive battery cable (3) from the retainers (4) on the body wiring harness.



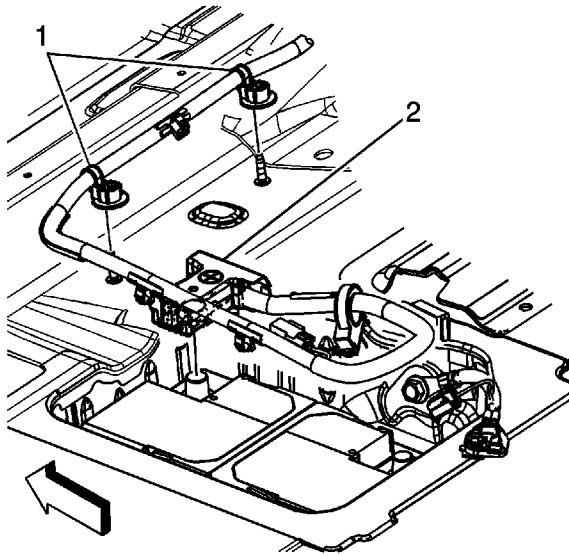
14. Remove the positive battery cable (1) from the body wiring harness right front sill plate (2).



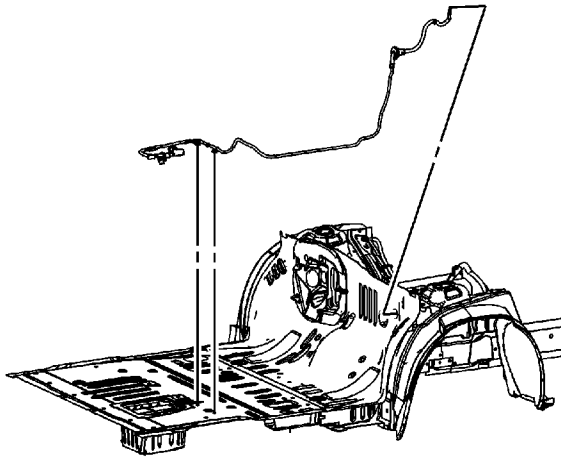
15. Remove the body wiring harness (1) from the positive battery cable clips (4).
16. If equipped with regular production option (RPO) UE1, disconnect the body wiring harness electrical connector (2) from the battery cable electrical connector (3).



17. Disconnect the body wiring harness electrical connector (4) from the negative battery cable electrical connector (1).
18. Disconnect the body wiring harness electrical connector (3) from the battery current sensor (2).

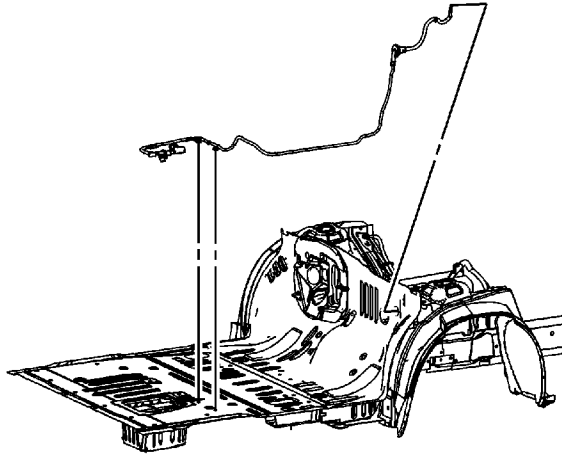


19. Remove the positive battery cable clips (1) from the floor panel studs.
20. Open the positive battery cable cover (2).
21. Loosen the positive battery cable terminal nut.

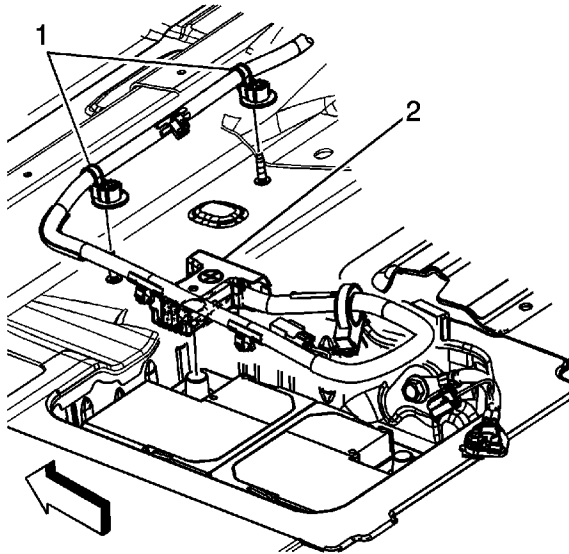


22. Remove the positive battery cable out from under the rear carpet and remove the cable from the vehicle.

Installation Procedure



1. Route the positive battery cable under the rear carpet and position the cable from the vehicle floor pan.



2. Install the positive battery cable clips (1) to the floor panel studs.
3. Install the positive battery cable terminal to the battery positive terminal.

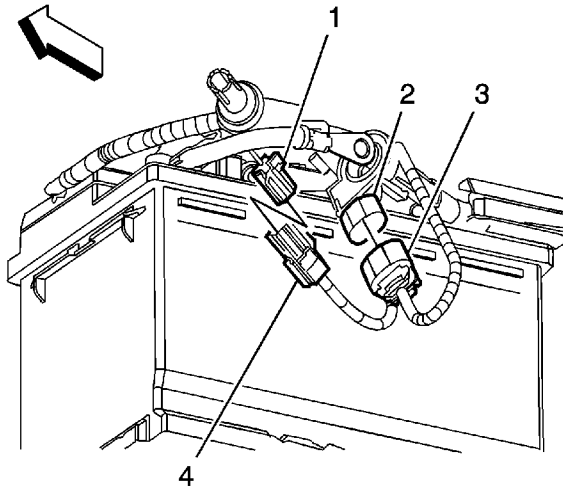
Caution: Refer to [Fastener Caution](#) in the Preface section.

4. Tighten the positive battery cable terminal nut.

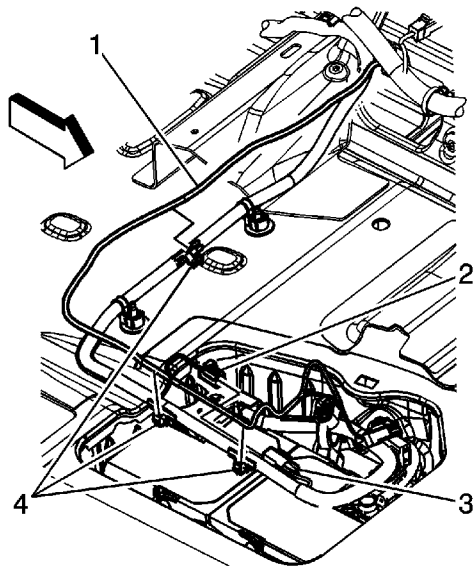
Tighten

Tighten the nut to 9 N·m (80 lb in).

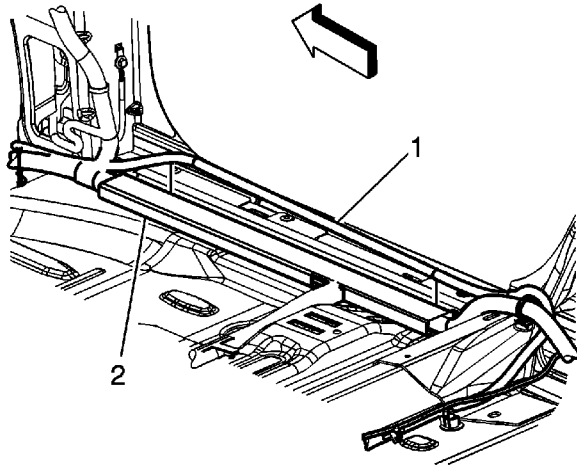
5. Close the positive battery cable cover (2).



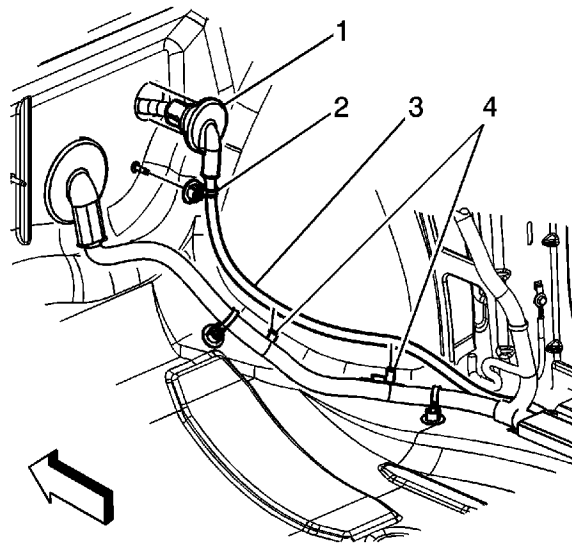
6. Connect the body wiring harness electrical connector (4) to the negative battery cable electrical connector (1).
7. Connect the body wiring harness electrical connector (3) to the battery current sensor (2).



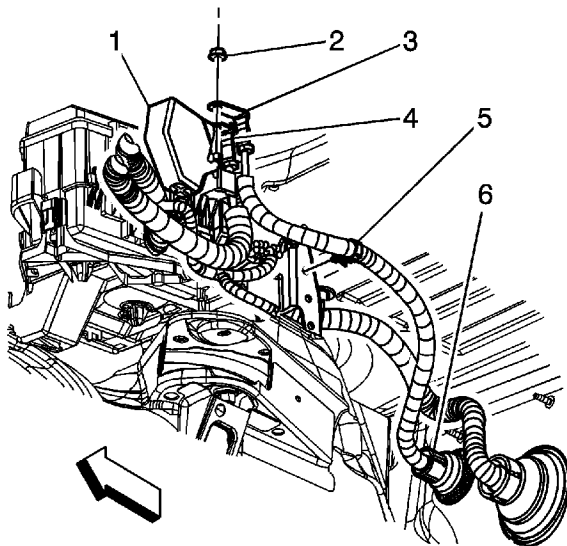
8. Install the body wiring harness (1) to the positive battery cable clips (4).
9. If equipped with RPO UE1, connect the body wiring harness electrical connector (2) to the battery cable electrical connector (3).



10. Install the positive battery cable (1) to the body wiring harness right front sill plate (2).



11. Push the grommet (1) through the dash panel.
12. Install the positive battery cable (3) to the retainers (4) on the body wiring harness.
13. Install the positive battery cable clip (2) to the stud on the dash panel.
14. Reposition the passenger side corner of the dash panel sound barrier.
15. Install the passenger side carpet. Refer to [Front Floor Panel Carpet Replacement - Right Side](#).
16. Install the right side instrument panel insulator panel. Refer to [Instrument Panel Insulator Panel Replacement - Right Side](#).



17. Ensure that the positive battery cable grommet (6) is completely seated through the dash panel.
18. Install the positive battery cable terminal (3) to the junction block stud.
19. Install the accessory wiring junction block nut (2).

Tighten

Tighten the nut to 22 N·m (16 lb ft).

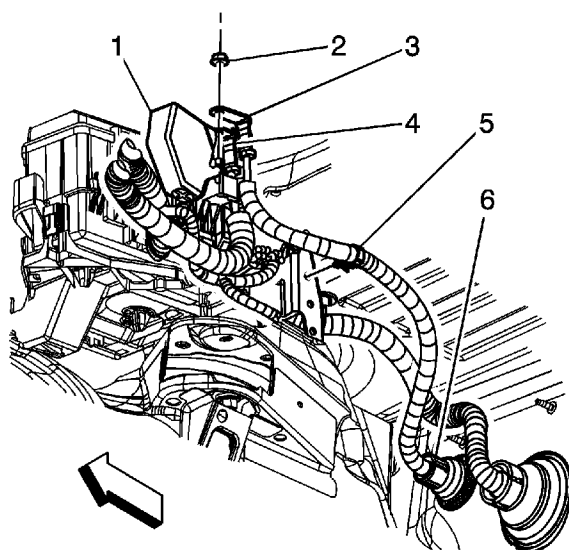
20. Close the accessory wiring junction block cover (1).
21. Install the positive battery cable clip (5) to the multiuse relay bracket.
22. Install the fuel injector sight shield. Refer to [Fuel Injector Sight Shield Replacement](#).
23. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).

Battery Positive Junction Block Cable Replacement

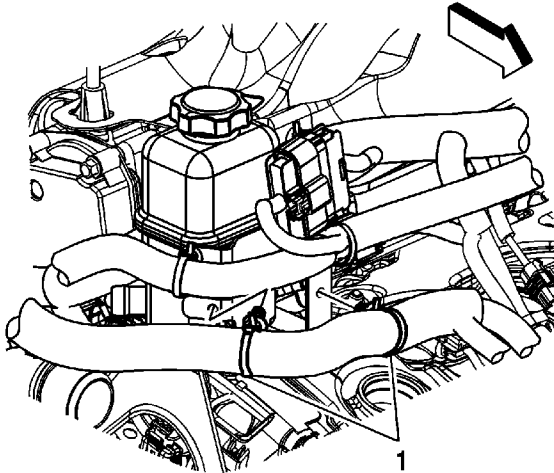
Removal Procedure

Note:

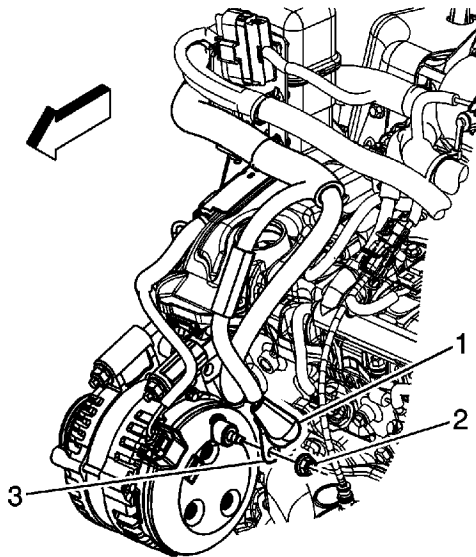
- Always use replacement cables that are of the same type, diameter and length of the cables that you are replacing.
- Always route the replacement cable the same way as the original cable.



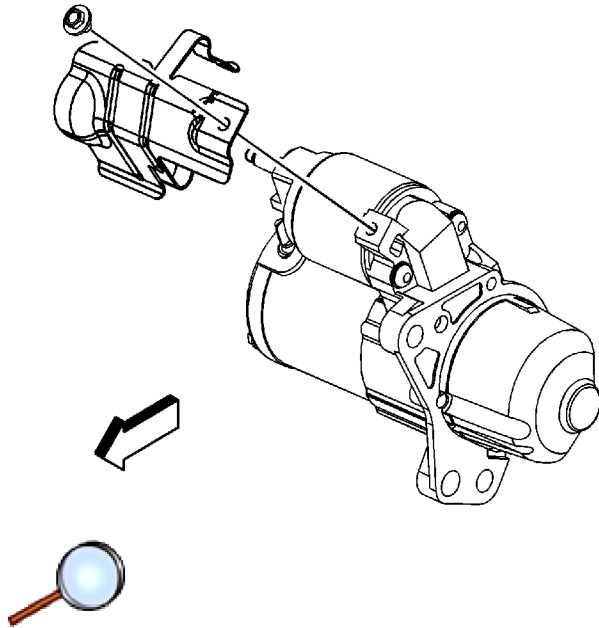
1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Remove the fuel injector sight shield. Refer to [Fuel Injector Sight Shield Replacement](#).
3. Open the accessory wiring junction block cover (1).
4. Remove the accessory wiring junction block nut (2).
5. Remove the positive battery cable terminal (3) from the stud.
6. Remove the battery positive junction block cable terminal (4) from the stud.



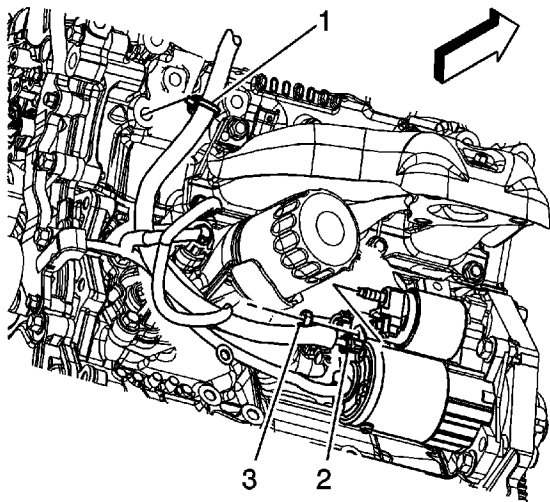
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7. Remove the battery positive junction block cable clips (1) from the power steering reservoir bracket.



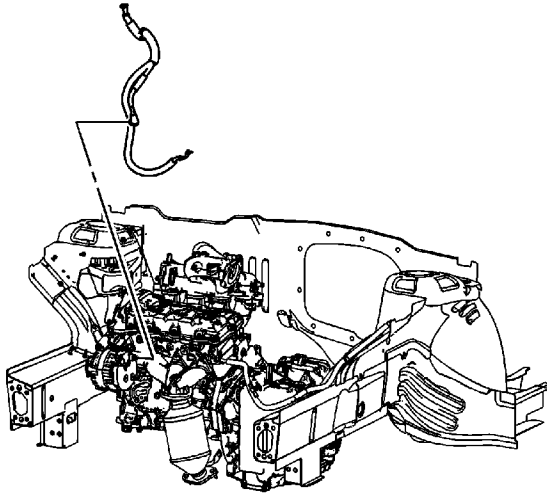
- 
8. Reposition the battery positive junction block cable boot (1).
9. Remove the battery positive junction block cable to generator nut (3).
10. Remove the battery positive junction block cable terminal (3) from the generator stud.



11. Remove the left catalytic converter. Refer to [Catalytic Converter Replacement - Left Side](#).
12. Remove the starter heat shield bolt and shield.

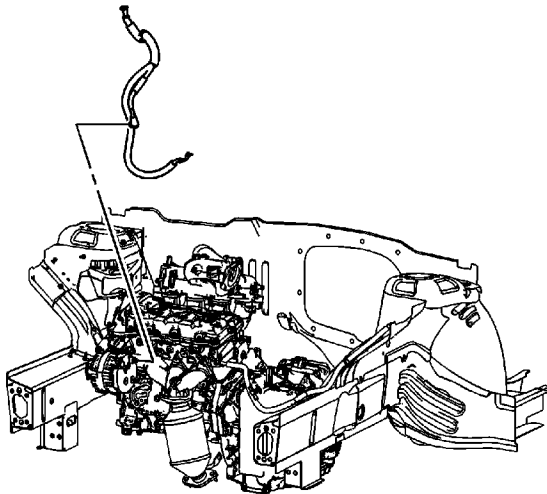


13. Remove the battery positive junction block cable clip (1) from the engine block.
14. Remove the starter solenoid BAT terminal nut (3).
15. Remove the battery positive junction block cable terminal (2) from the starter.

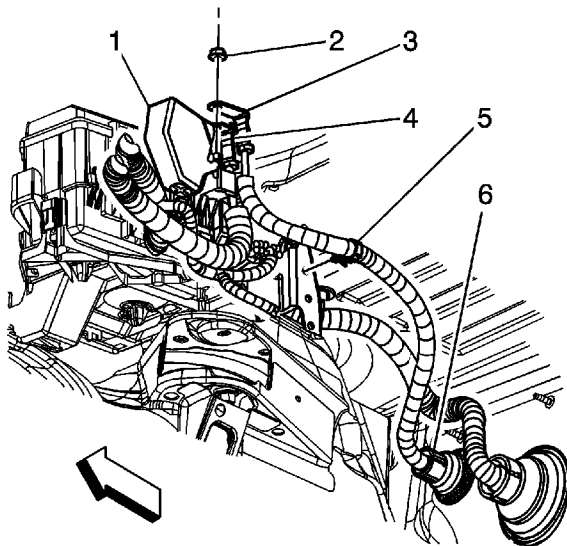


16. Lower the vehicle.
17. Remove the battery positive junction block cable from the vehicle.

Installation Procedure



1. Install the battery positive junction block cable to the vehicle.



2. Install the battery positive junction block cable terminal (4) to the stud.
3. Install the positive battery cable terminal (3) to the junction block stud.

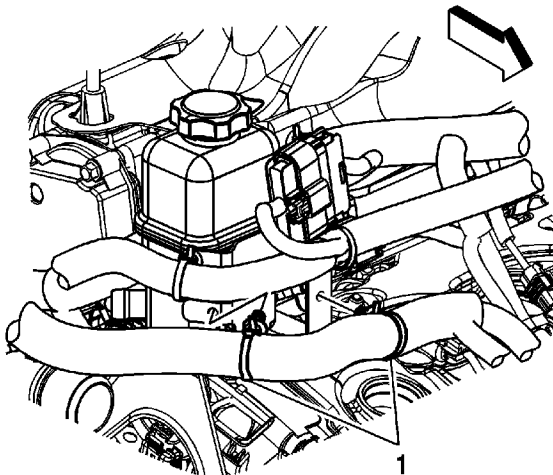
Caution: Refer to [Fastener Caution](#) in the Preface section.

4. Install the accessory wiring junction block nut (2).

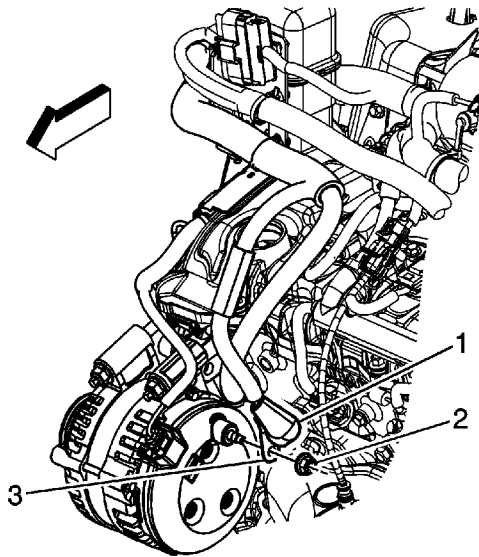
Tighten

Tighten the nut to 22 N·m (16 lb ft).

5. Close the accessory wiring junction block cover (1).



6. Install the battery positive junction block cable clips (1) to the power steering reservoir bracket.

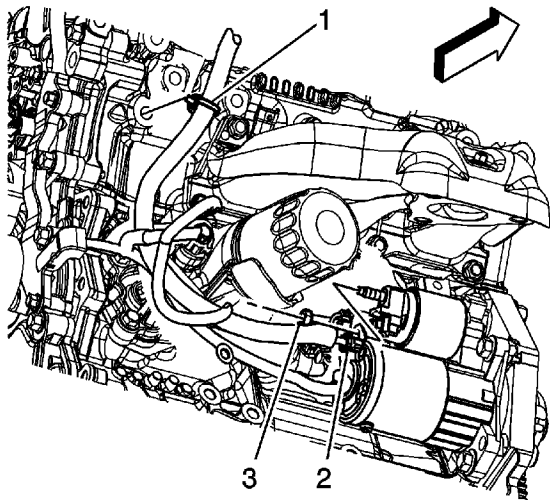


7. Install the battery positive junction block cable terminal (3) to the generator stud.
8. Install the battery positive junction block cable to generator nut (3).

Tighten

Tighten the nut to 22 N·m (16 lb ft).

9. Position the battery positive junction block cable boot (1).
10. Raise and suitably support the vehicle. Refer to [Lifting and Jacking the Vehicle](#).

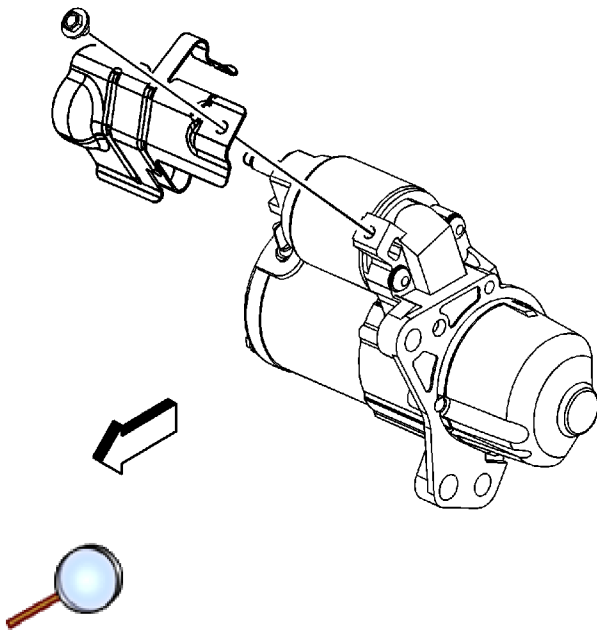


11. Install the battery positive junction block cable terminal (2) to the starter.
12. Install the starter solenoid BAT terminal nut (3).

Tighten

Tighten the nut to 25 N·m (18 lb ft).

13. Install the battery positive junction block cable clip (1) to the engine block.



14. Install the starter heat shield and bolt.

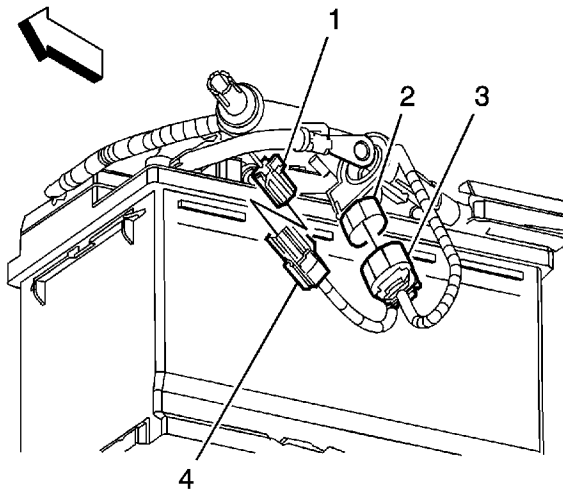
Tighten

Tighten the bolt to 7 N·m (62 lb in).

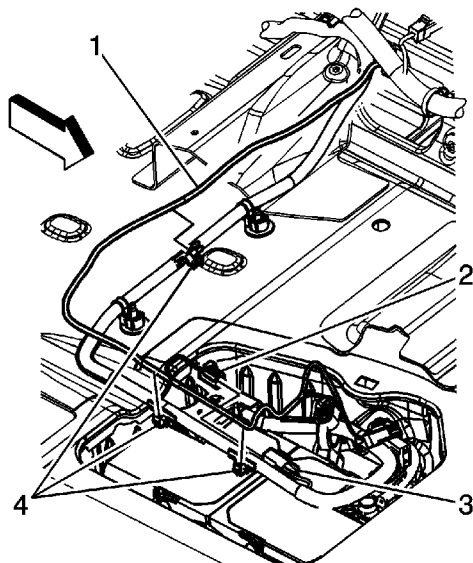
15. Install the left catalytic converter. Refer to [Catalytic Converter Replacement - Left Side](#).
16. Install the fuel injector sight shield. Refer to [Fuel Injector Sight Shield Replacement](#).
17. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).

Battery Replacement

Removal Procedure

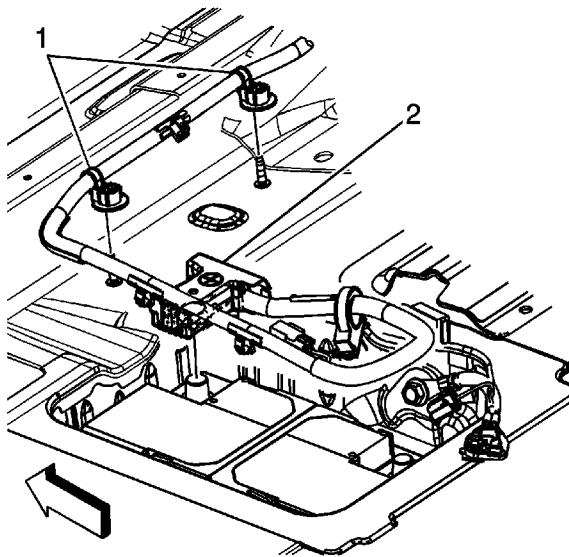


1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Disconnect the body wiring harness electrical connector (3) from the battery current sensor (2).
3. Disconnect the body wiring harness electrical connector (4) from the negative battery cable electrical connector (1).

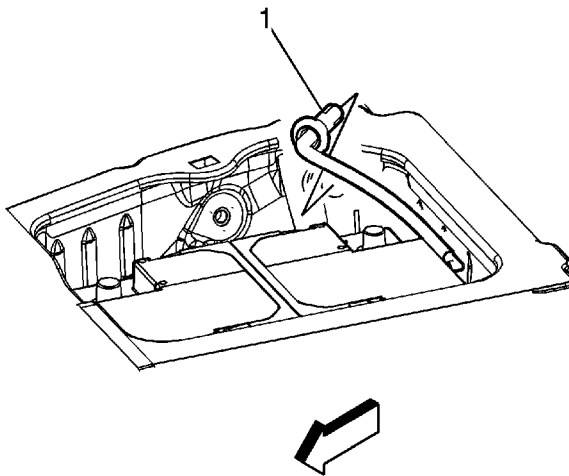




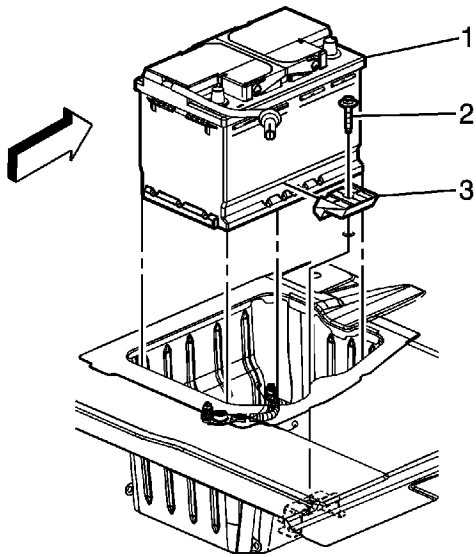
4. Disconnect the body wiring harness electrical connector (2) from the positive battery cable electrical connector (3).



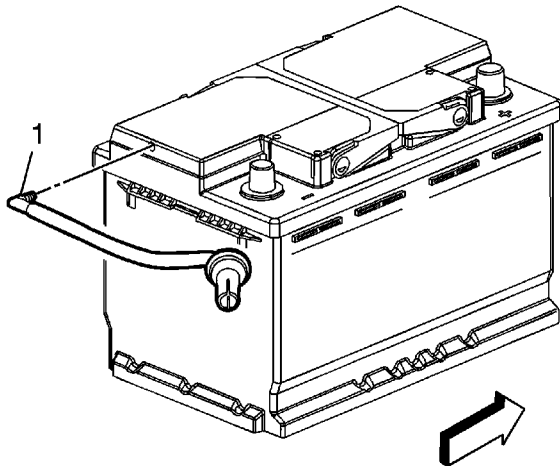
5. Open the positive battery cable cover (2).
6. Loosen the positive battery cable terminal nut.
7. Remove the positive battery cable terminal from the battery positive terminal and reposition the cable out of the way.



8. Remove the battery vent hose grommet (1) from the battery box.

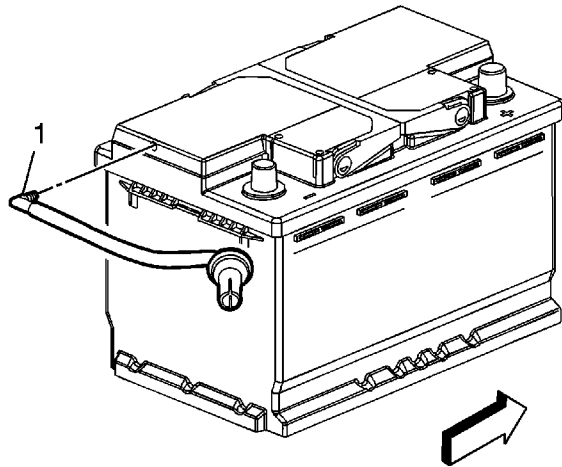


9. Remove the battery hold down bolt (2).
10. Remove the battery hold down (3).
11. Remove the battery (1).



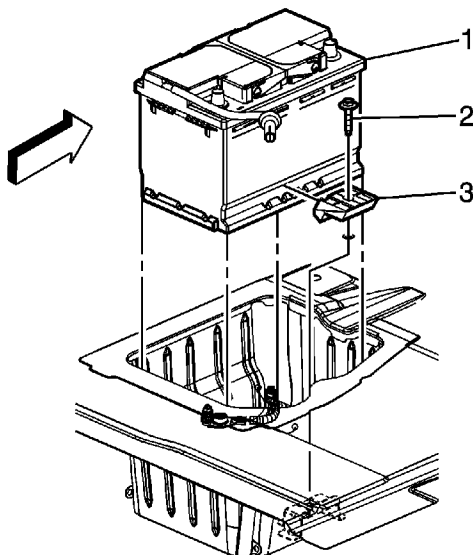
12. Remove the battery vent hose (1) from the battery, if required.

Installation Procedure



Important: Replacement batteries may require the vent plug in the battery vent hole to be moved from one end of the battery to the other to permit vent tube installation per original design.

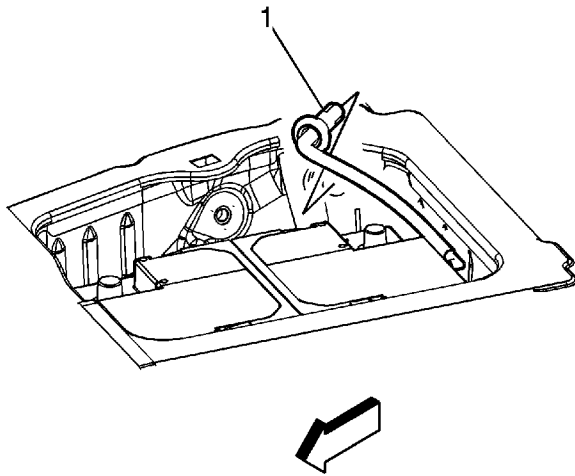
1. Install the battery vent hose (1) to the battery.



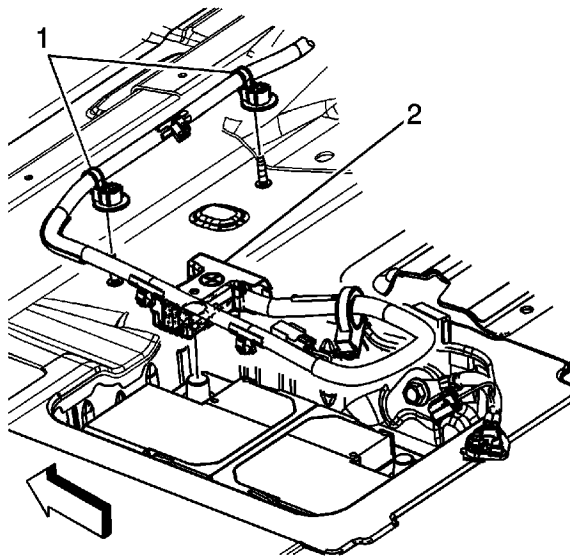
2. Install the battery (1) into the battery box.
3. Install the battery hold down (3).

Caution: Refer to [Fastener Caution](#) in the Preface section.

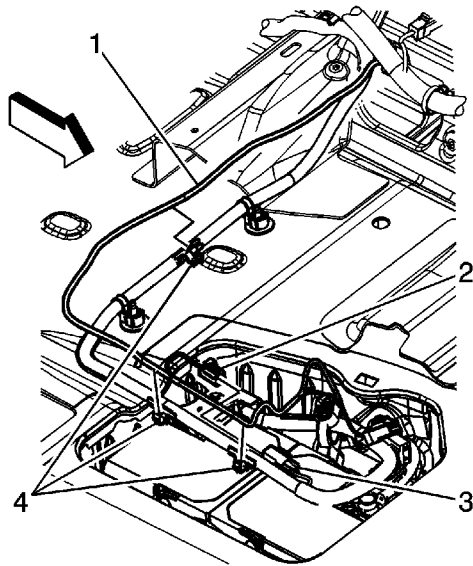
4. Install the battery hold down bolt (2) and tighten to **25 N·m (18 lb ft)**.



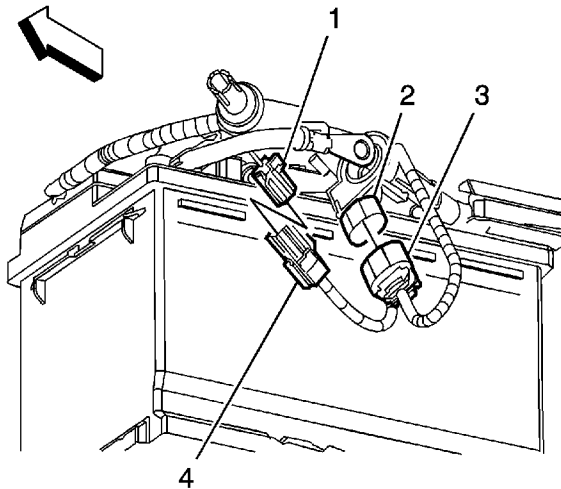
5. Install the battery vent hose grommet (1) to the battery box.



6. Position the positive battery cable, and Install the cable terminal to the battery positive terminal.
7. Tighten the positive battery cable terminal nut and tighten to **9 N·m (80 lb in)**.
8. Close the positive battery cable cover (2).



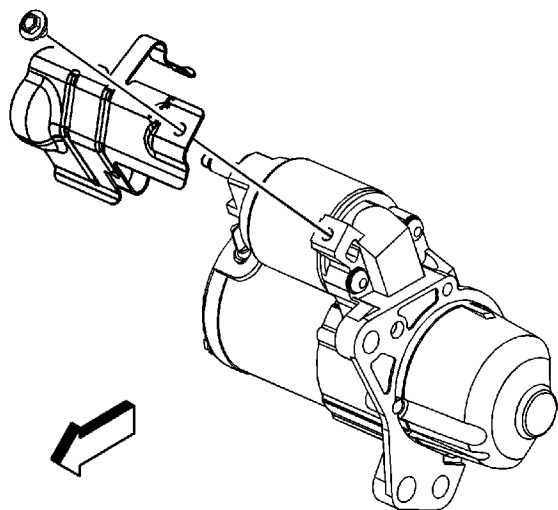
9. Connect the body wiring harness electrical connector (2) to the positive battery cable electrical connector (3).



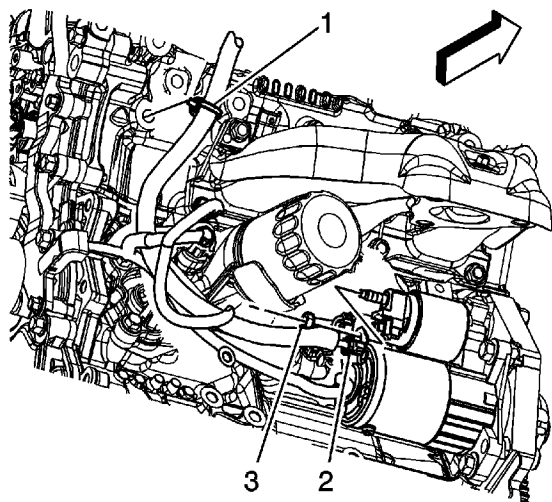
10. Connect the body wiring harness electrical connector (4) to the negative battery cable electrical connector (1).
11. Connect the body wiring harness electrical connector (3) to the battery current sensor (2).
12. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).

Starter Replacement

Removal Procedure



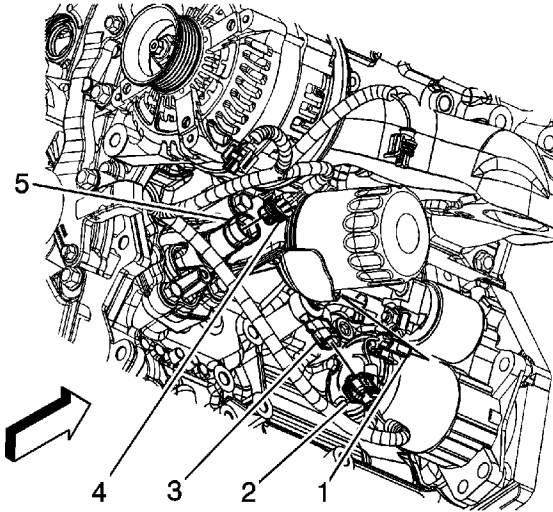
1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Remove the left catalytic converter. Refer to [Catalytic Converter Replacement - Left Side](#).
3. Remove the starter heat shield bolt and shield.



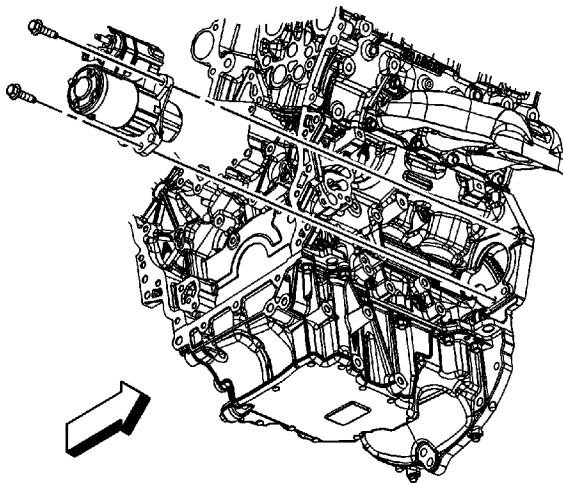
4. Remove the starter solenoid BAT terminal nut (3).

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5. Remove the battery positive junction block cable terminal (2) from the starter.



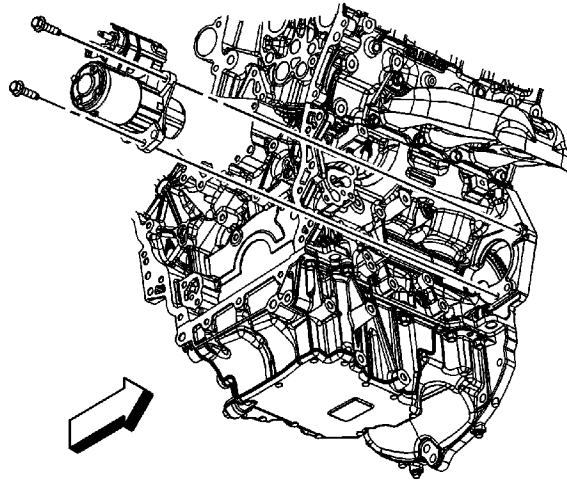
6. Disconnect the engine wiring harness electrical connector (1) from the starter.



7. Remove the starter bolts and starter.

Installation Procedure

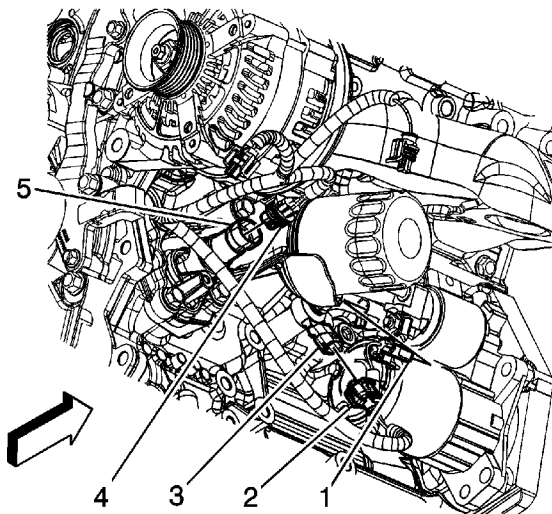
Caution: Refer to [Fastener Caution](#) in the Preface section.



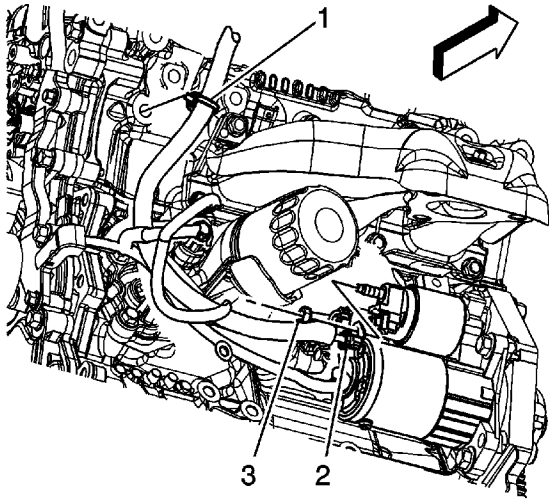
1. Install the starter and bolts.

Tighten

Tighten the bolts to 50 N·m (37 lb ft).



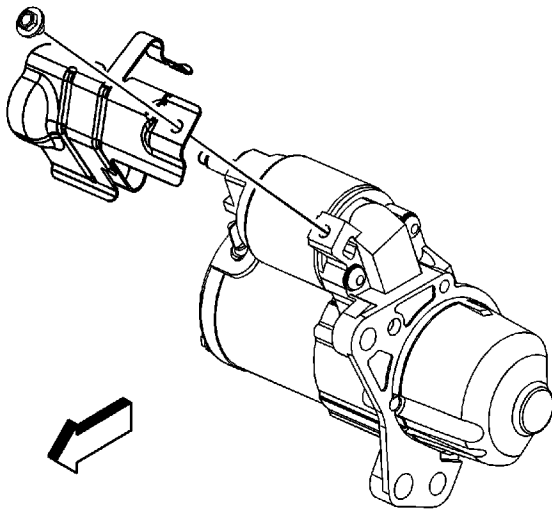
2. Connect the engine wiring harness electrical connector (1) to the starter.



3. Install the battery positive junction block cable terminal (2) to the starter.
4. Install the starter solenoid BAT terminal nut (3).

Tighten

Tighten the nut to 25 N·m (18 lb ft).



5. Install the starter heat shield and bolt.

Tighten

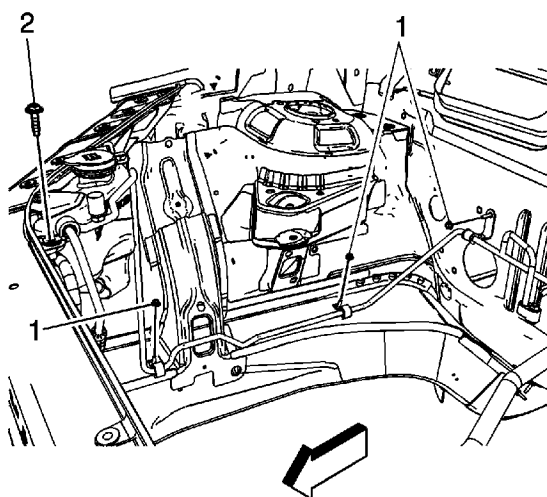
Tighten the bolt to 7 N·m (62 lb in).

6. Install the left catalytic convertor. Refer to [Catalytic Converter Replacement - Left Side](#).

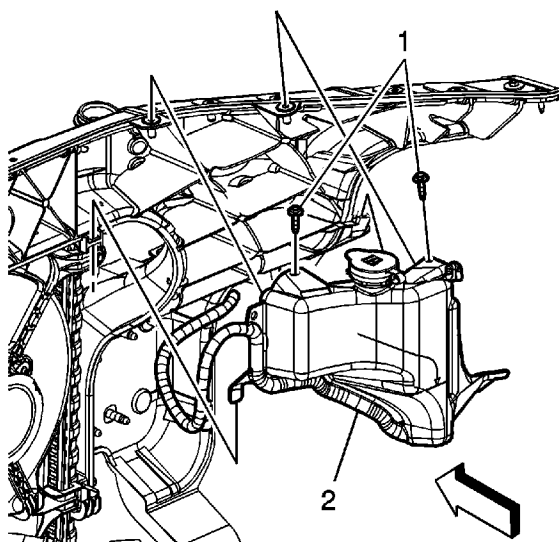
7. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).

Generator Replacement

Removal Procedure



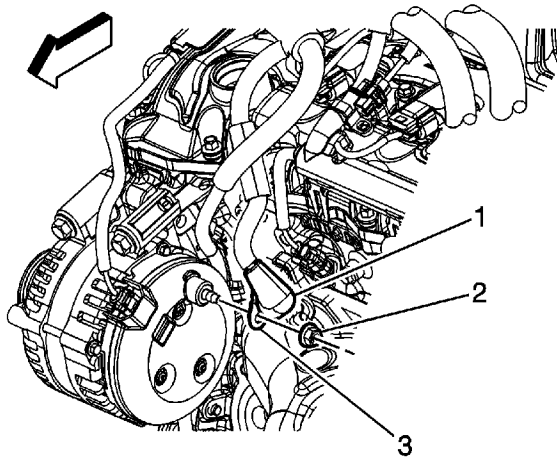
1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).
2. Remove the drive belt. Refer to [Drive Belt Replacement](#).
3. Remove the fuel injector sight shield. Refer to [Fuel Injector Sight Shield Replacement](#).
4. Remove the engine mount strut bracket. Refer to [Engine Mount Strut Bracket Replacement - Right Side](#).
5. Remove the air conditioning (A/C) liquid line clamp bolt (2) from the upper radiator support.



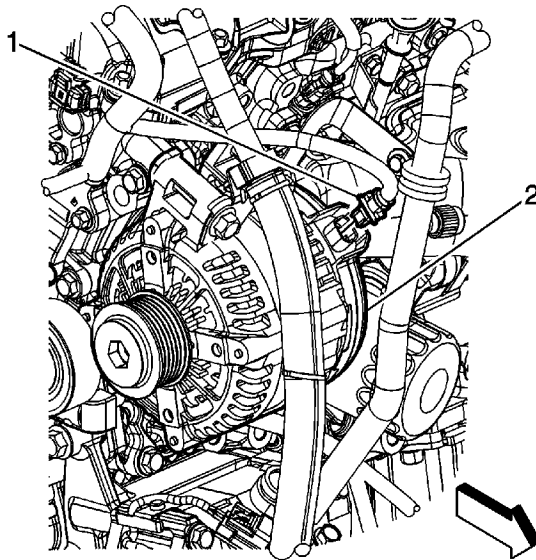
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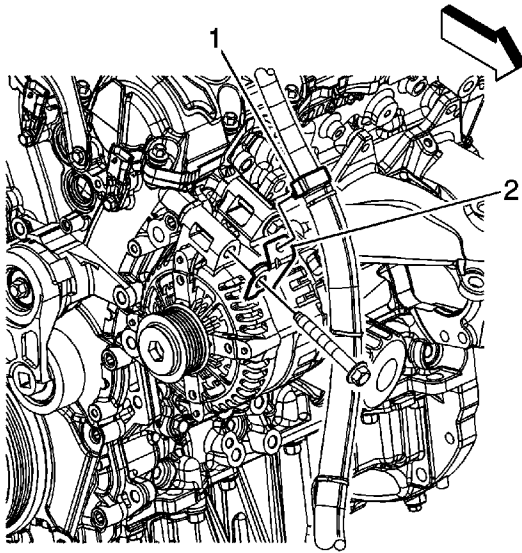
6. Remove the coolant recovery reservoir bolts (1).
7. Remove the reservoir (2) tabs from the upper radiator support, position the reservoir out of the way.



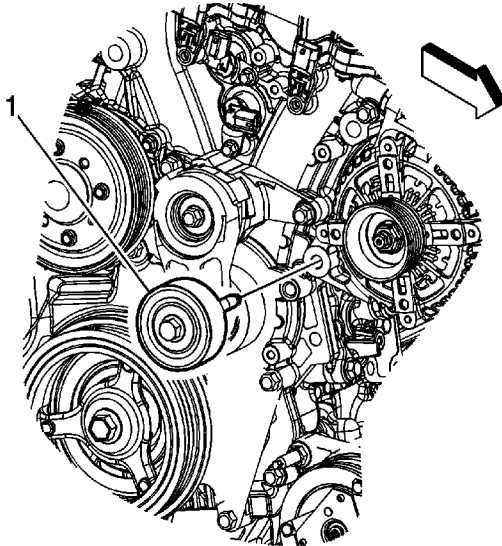
8. Reposition the battery positive junction block cable boot (1).
9. Remove the battery positive junction block cable to generator nut (2).
10. Remove the battery positive junction block cable terminal (3) from the generator stud.



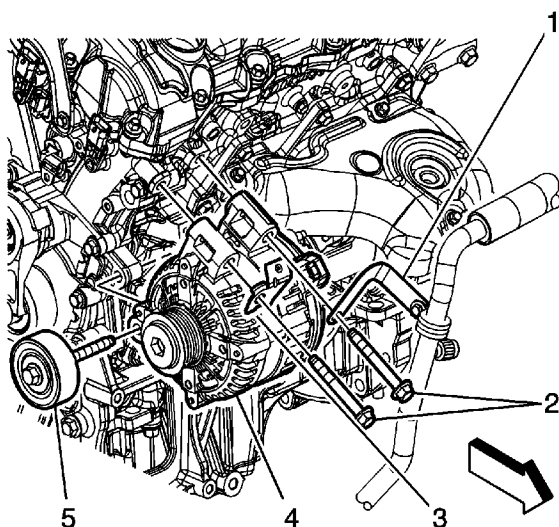
11. Disconnect the engine wiring harness electrical connector (1) from the generator (2).



12. Remove the power steering reservoir inlet hose clip (1) from the power steering fluid reservoir hose clip bracket (2).

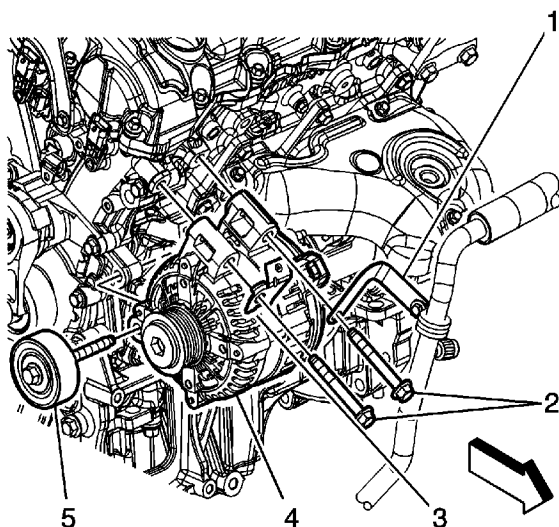


13. Loosen the idler pulley (1) bolt and slide the pulley out as far as possible.



14. Remove the generator bolts (2).
15. Remove the A/C compressor/evaporator hose bracket (1) from against the generator.
16. Remove the power steering fluid reservoir hose clip bracket (3) from against the generator.
17. Remove the generator (4) and idler pulley (5) together from the vehicle.
18. Remove the idler pulley from the generator.

Installation Procedure



1. Install the idler pulley (5) to the generator.
2. Install the generator (4) and idler pulley together to the vehicle.
3. Install the power steering fluid reservoir hose clip bracket (1) onto one of the generator bolts, and install the bolt finger tight.

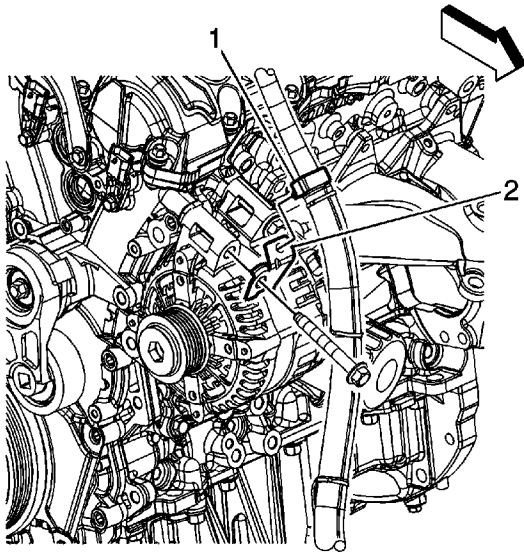
4. Install the A/C compressor/evaporator hose bracket (2) onto the other generator bolt, and install the bolt finger tight.

Caution: Refer to [Fastener Caution](#) in the Preface section.

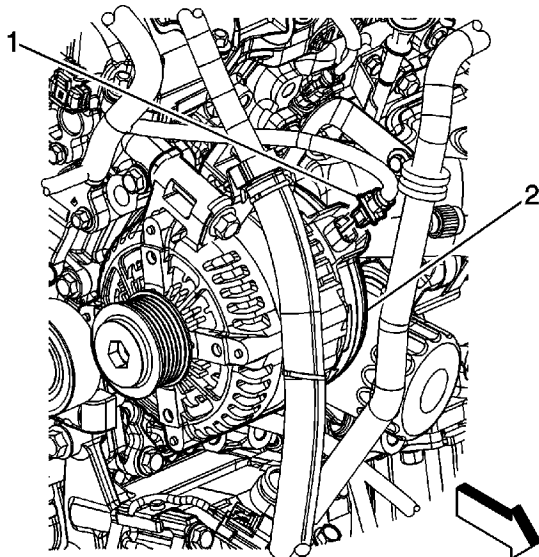
5. Tighten the idler pulley/generator bolts (2) in the following sequence:
 - 5.1. Idler pulley bolt
 - 5.2. Generator bolts

Tighten

Tighten the bolts to 50 N·m (37 lb ft).

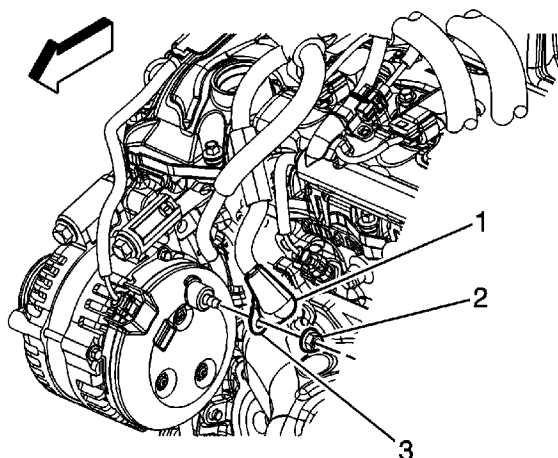


6. Install the power steering reservoir inlet hose clip (1) to the power steering fluid reservoir hose clip bracket (2).





7. Connect the engine wiring harness electrical connector (1) to the generator.

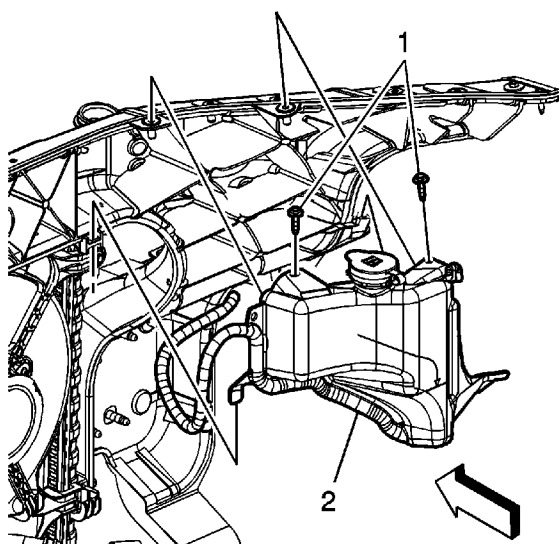


8. Install the battery positive junction block cable terminal (3) to the generator stud.
9. Install the battery positive junction block cable to generator nut (2).

Tighten

Tighten the nut to 22 N·m (16 lb ft).

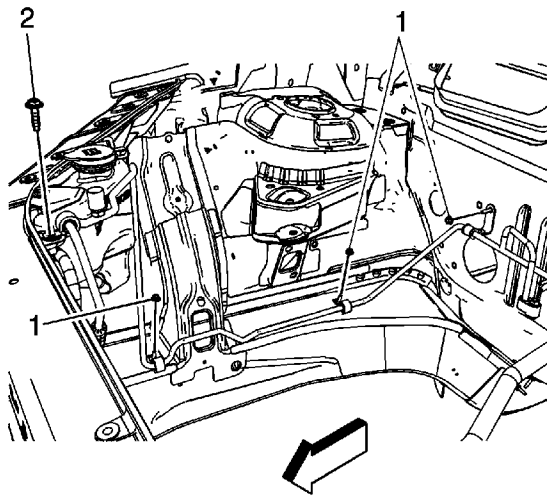
10. Position the battery positive junction block cable boot (1) over the stud.



11. Install the coolant recovery reservoir (2) tabs into the appropriate slots in the upper radiator support.
12. Install the coolant recovery reservoir bolts (1).

Tighten

Tighten the bolts to 5 N·m (44 lb in).



13. Install the A/C liquid line clamp bolt (2) at the upper radiator support.

Tighten

Tighten the bolt to 9 N·m (80 lb in).

14. Install the engine mount strut bracket. Refer to [Engine Mount Strut Bracket Replacement - Right Side](#).
15. Install the fuel injector sight shield. Refer to [Fuel Injector Sight Shield Replacement](#).
16. Install the drive belt. Refer to [Drive Belt Replacement](#).
17. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#).