

Harness Relay, CNG VN

SB-10055556-2387

SP 373-020, Harness Relay, CNG

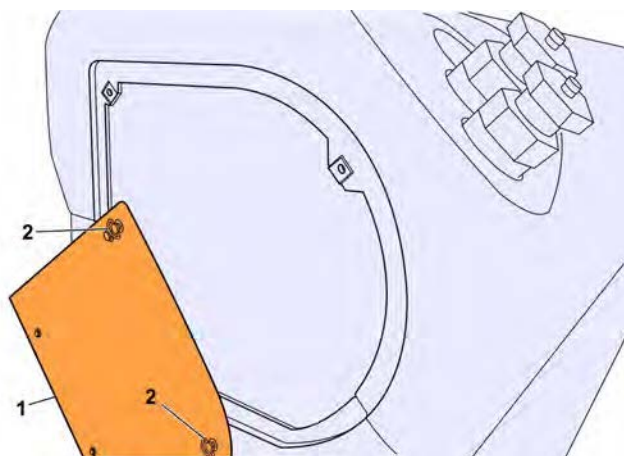
(April 2014)

On certain Volvo VN models equipped with CNG (Compressed Natural Gas) engines, built between 07/01/2013 and 12/30/2013, there may be missing wire seals in the chassis harness connector and the CNG tank connector. This could cause corrosion in connections as well as allow the water to wick up to the harness.

Inspection

You must read and understand the precautions and guidelines in Service Information, group 3, "General Safety Practices, Electrical" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

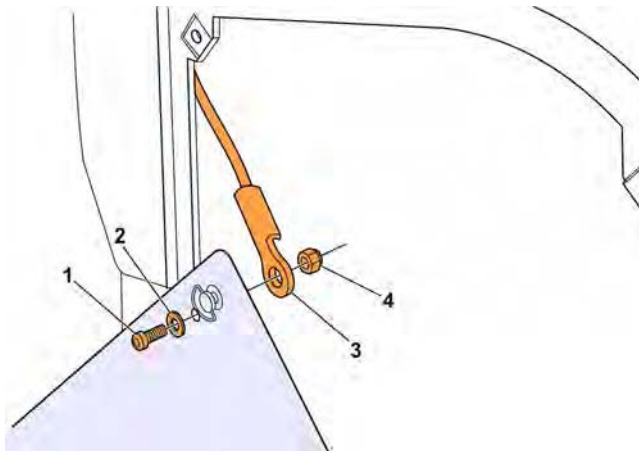
- 1 Secure the vehicle for service by parking it on a flat level surface, applying the parking brake, chocking the rear wheel, and placing the transmission in neutral.
- 2 Disconnect all cables from the negative (ground) battery terminals to prevent personal injury from electrical shock and prevent damage to electrical components.
- 3 Remove the rear panel from CNG tank.



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1. Panel
2. Clip

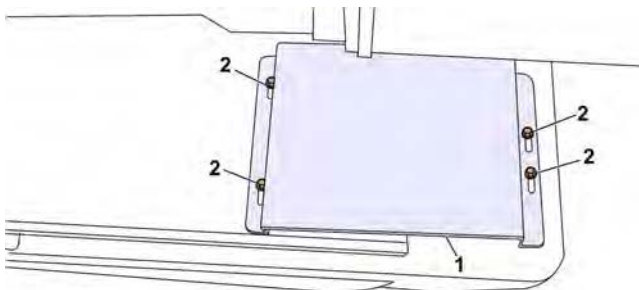
4 Remove the door tether.



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- 1. Bolt
- 2. Washer
- 3. Strap
- 4. Nut

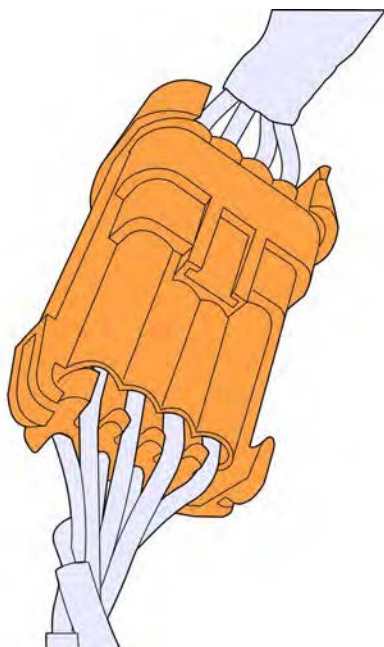
5 Remove heat shield.



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- 1. Heat shield
- 2. Bolts

- 6 Disconnect the harness connector and remove safety lock.

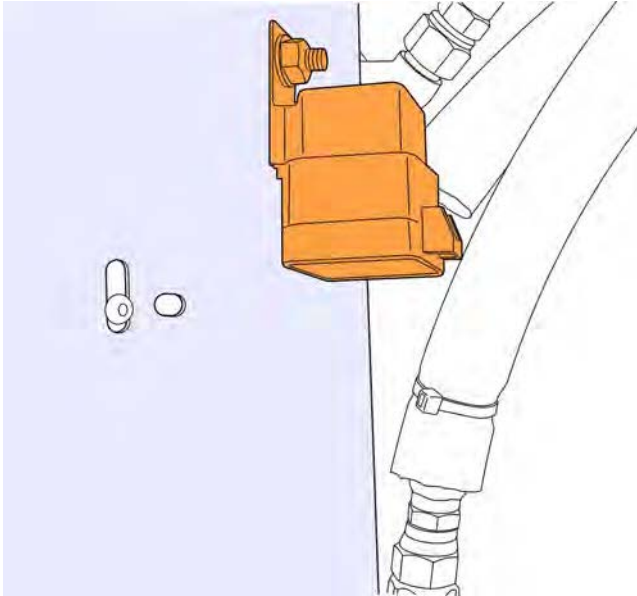


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CNG tank side connector

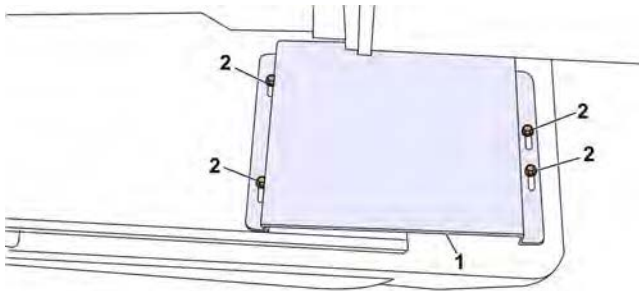
- 7 Look for seals on the wires on the CNG tank side connector.
A. If seals present continue to step 8.
B. If **NO** seals present to go to repair procedure on page 6.

- 8 Remove the relay from wire bundle and mount it vertical on the adjacent panel using the existing fastener.



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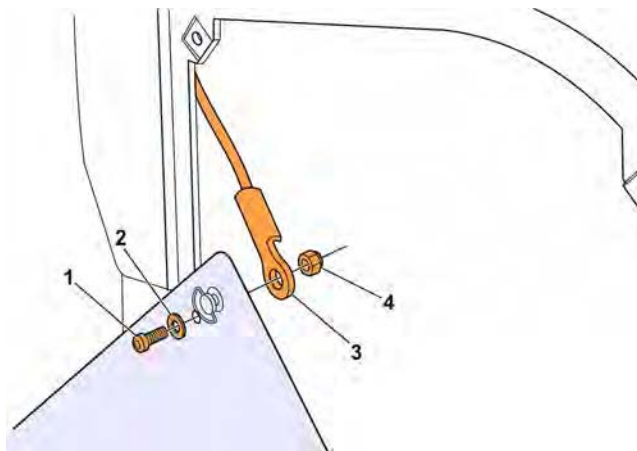
- 9 Reconnect the harness connector to the relay.
Note: Secure harness with cable ties as necessary.
10 Reinstall heat shield.



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1. Heat shield
2. Bolts

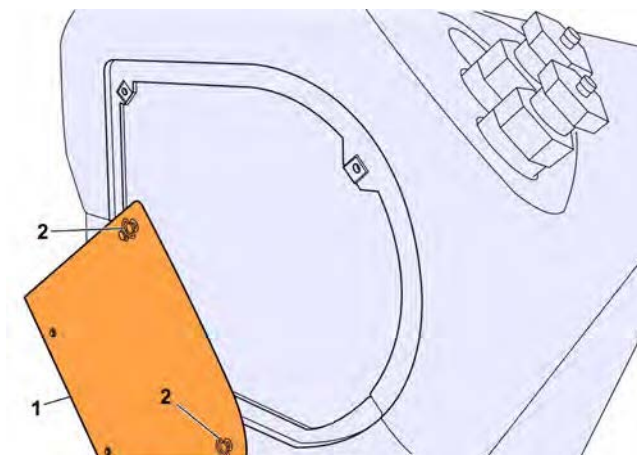
11 Fasten tether to the door.



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- 1. Bolt
- 2. Washer
- 3. Strap
- 4. Nut

12 Secure door to CNG tank.



W3088680

- 1. Panel
- 2. Clip

13 Install all the previously removed cables to the negative (ground) battery terminals.

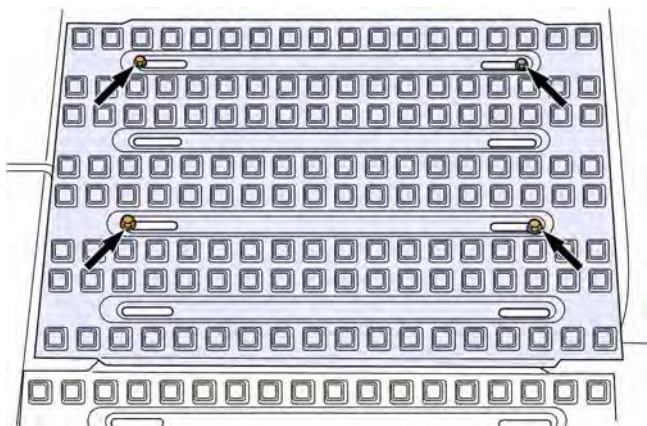
14 Start engine and check operation.

Repair

Required Parts

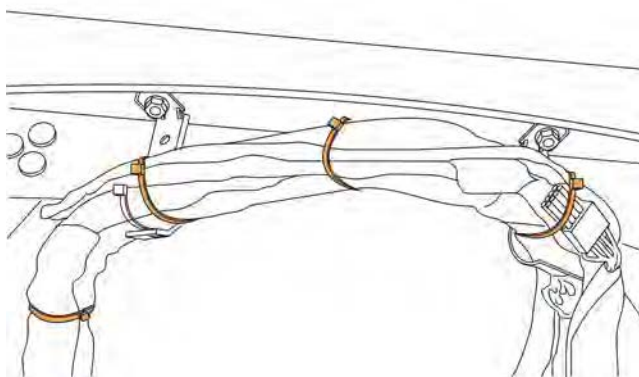
Quantity	Part Number	Description
1	20469544	Cloth Tape
A/R	3949524	Butt Splice
A/R	Local Supply	Heat Shrink Tubing
A/R	948211	Cable Ties

1 Remove deck plate.



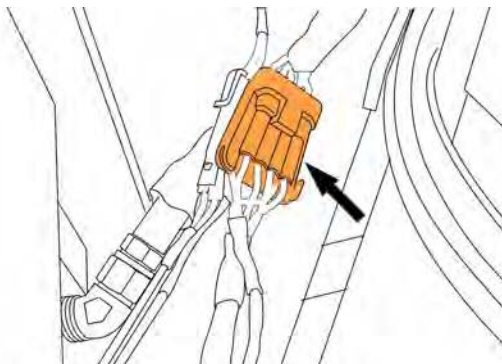
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- 2 Remove cable ties to loosen harness.



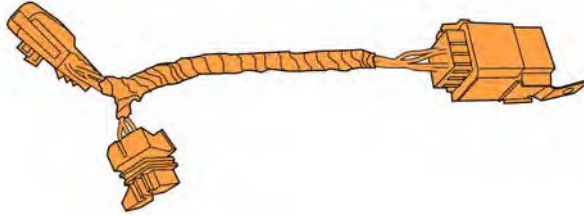
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- 3 Disconnect the CNG tank harness and remove the relay jumper.



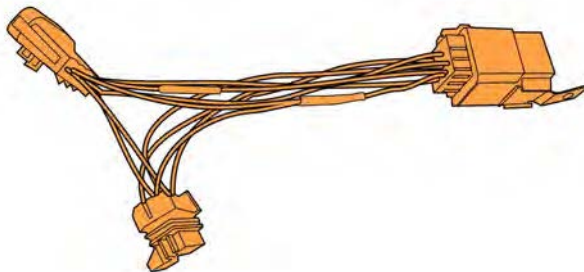
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- 4 Remove loom, tape and shielding wrap (If applicable) from wire harnesses.
- * Remove loom from CNG tank harness back approximately 2 inches
 - * Remove shielding and tape from the chassis harness back approximately 152 mm (6 in).



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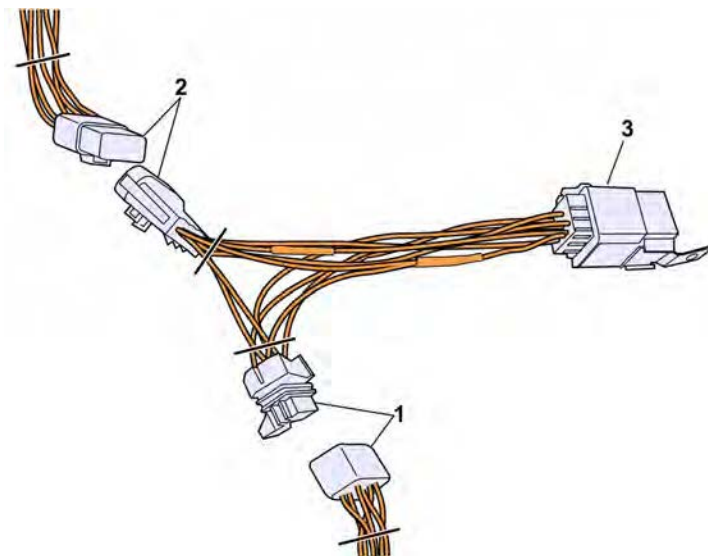
- * Remove tape completely from relay jumper harness



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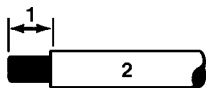
- 5 Cut each connector off of harness and strip each of the wires to length (8mm).

Note: Do not cut the relay connector.



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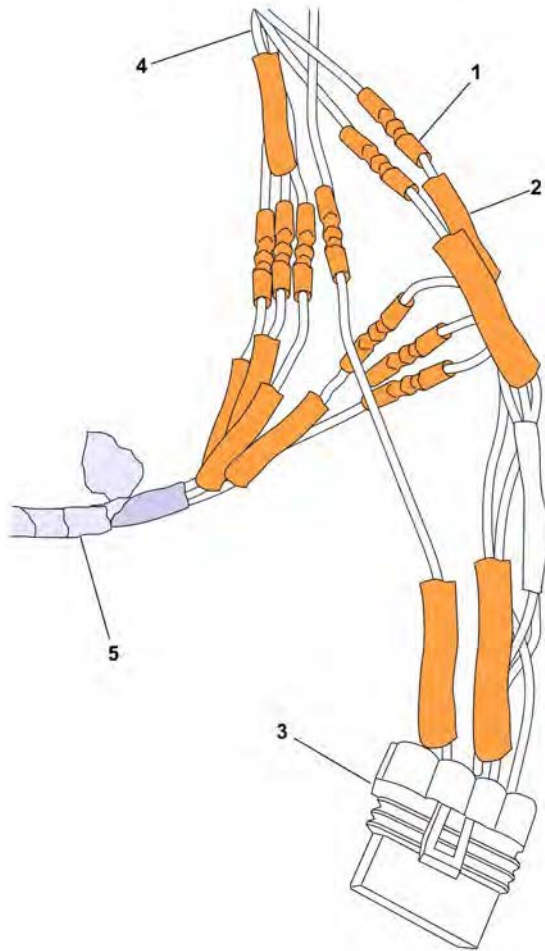
- 1. Chassis harness
- 2. CNG tank harness
- 3. Relay



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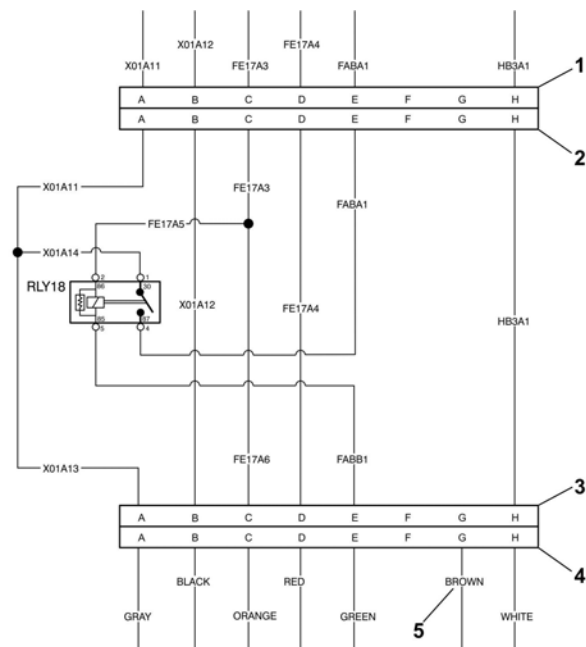
- 1. Strip as necessary
- 2. Wire

- 6 Install butt splices and slide a piece of shrink tubing onto each section of wire to be spliced.



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- 1. Butt Splice
- 2. Shrink tube
- 3. Relay connector
- 4. CNG tank harness
- 5. Chassis harness



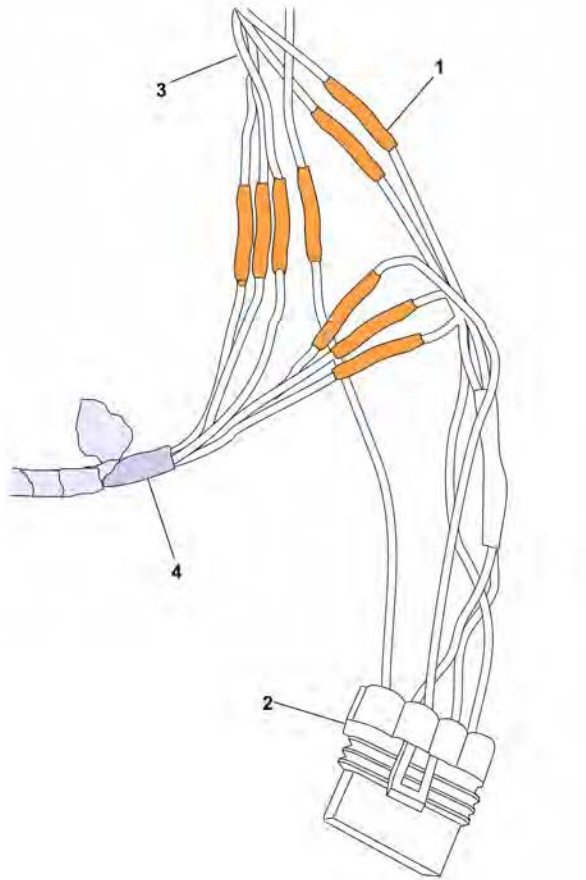
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1. Chassis connector
2. Relay Jumper (chassis)
3. Relay jumper (CNG tank)
4. CNG tank connector
5. No connection (cap and seal)

Note: Follow schematic diagram so that all wires are mated together properly.

Note: Schematic depicts harness and jumper wiring before any connections are cut.

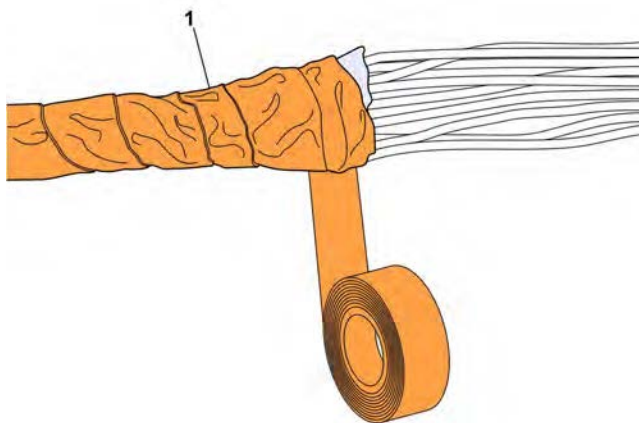
- 7 Shrink butt splices together.
- 8 Shrink the tubing.



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1. Shrink Tubing
2. Relay connector
3. CNG tank harness
4. Chassis harness

- 9 Tape the harness together with cloth tape.



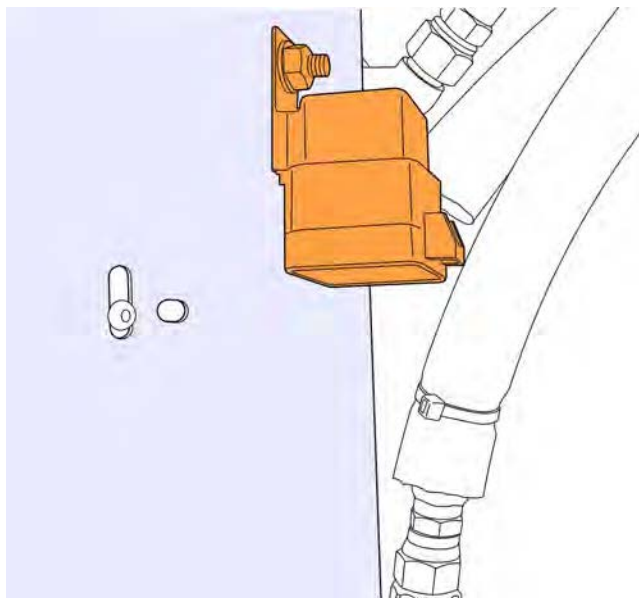
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1. Tape

Note: Overlap the tape by 1/3 each time a wrap is made.

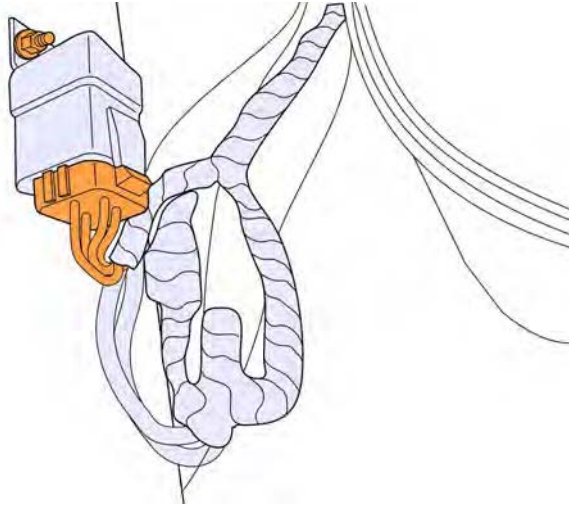
- 10 Reinstall the protective shield on the chassis harness

- 11 Mount relay into position as shown if not already secured.



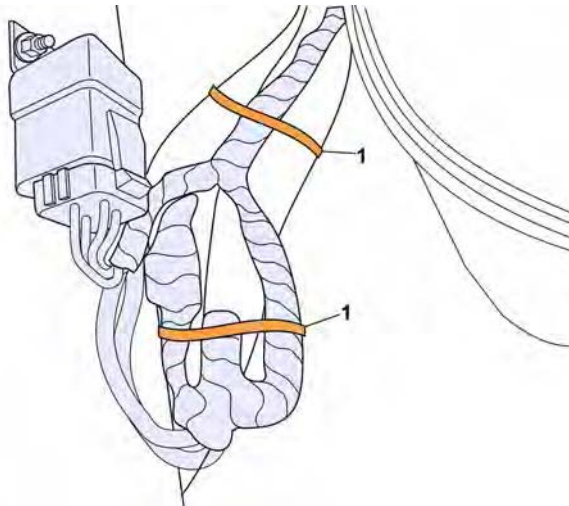
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12 Connect the harness to the relay.



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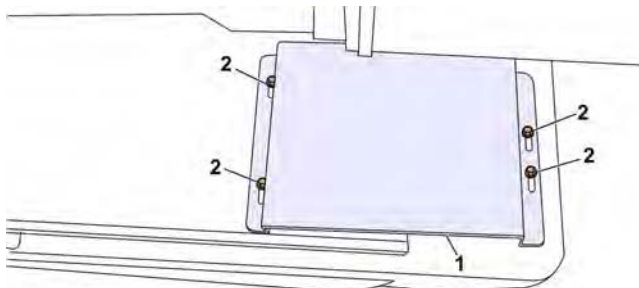
13 Cable tie lower section of harness and secure.



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1. Cable Ties

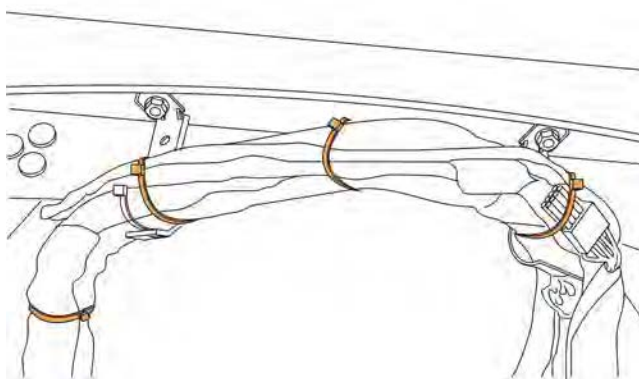
14 Reinstall heat shield.



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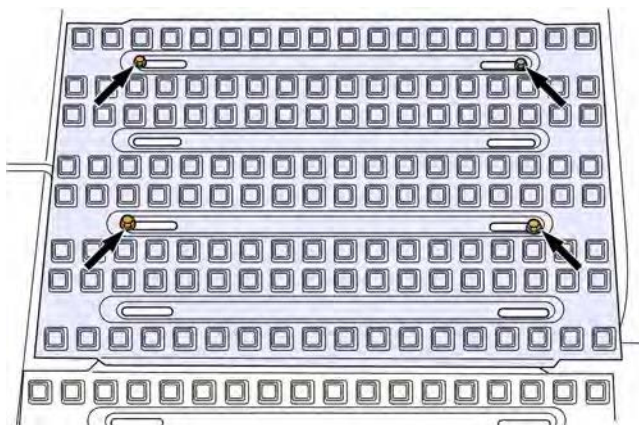
- 1. Heat shield
- 2. Bolts

15 Cable tie upper section of harness and secure.



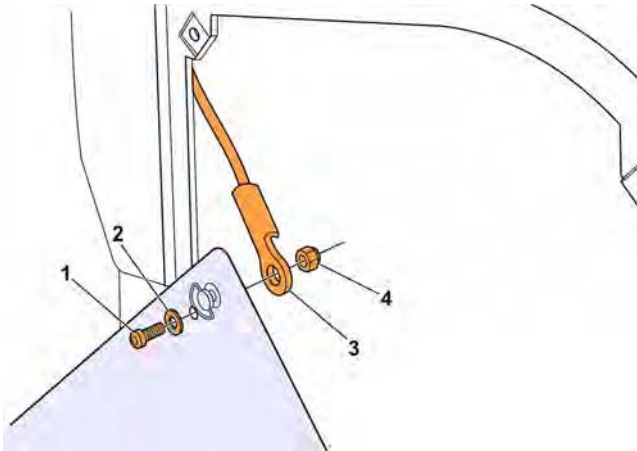
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16 Install deck plate.



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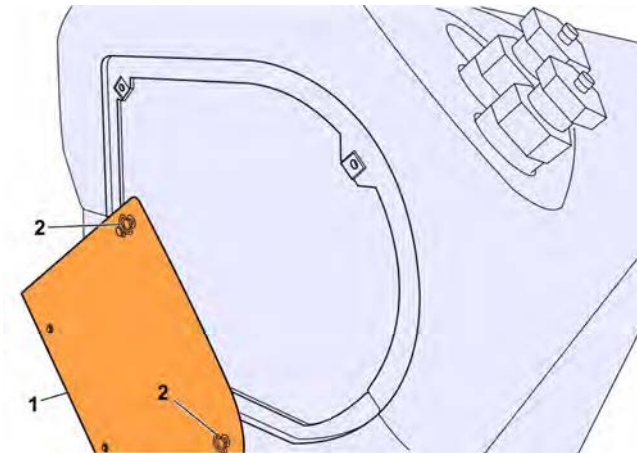
17 Fasten tether to the door.



W3088681

- 1. Bolt
- 2. Washer
- 3. Strap
- 4. Nut

18 Secure door to CNG tank.



W3088680

- 1. Panel
- 2. Clip

19 Install all the previously removed cables to the negative (ground) battery terminals.

20 Start engine and check operation.

Reimbursement

This repair is covered by an authorized Service Program. Reimbursement is obtained via the normal claim handling process.	
Claim Type (used only when uploading from the Dealer Bus. Sys.)	B
Recall Status	
Vehicle inspected, repair not required	1- Inspected OK
Vehicle repaired per instruction	2- Modified per instruction
Labor Code	
Primary Labor Code Inspection	37312-0-01 0.4 hrs
Primary Labor Code Inspection and Repair	37312-0-02 2.7 hrs
Time to take charge and determine campaign status	17003-0-01 0.3 hrs
Causal Part	21935013
Parts Disposition	
Authorization Number	SP373-020
Expiration Date	30 - April - 2015

Note: Take Charge Time is not included in the Labor Code for this operation. Take charge may be eligible but can only be used once per repair visit. If vehicle is having other warranty repairs performed, take charge should be charged to the warranty repair, otherwise take charge can be charged to this service program.