

SB-10045802-9092

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Coding Information

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Title: Alternator Wiring Re-route - 12643

Applies To: PayStar®, TranStar®, and ProStar® models built 6/1/09 thru 5/31/11 with a MaxxForce® 11 or 13 engine feature code 12UXJ or 12UXH and with alternator featurecode 08GGN, 08GGR, 08 GHG, or 08GHH.

DESCRIPTION

Alternator wiring re-route to prevent rub points.

Release Date: April 12, 2012

Supersedes: N/A

SRT: 0.5 hours

TOOLS REQUIRED

Assorted sockets
Ratchets
A wire cutter

MATERIALS REQUIRED

Sealing Compound

PARTS INFORMATION

PART NUMBER	PART DESCRIPTION	QUANTITY
8900223R91	Kit, SR11516 Bosch alternator routing	1
472141C2	Sealing compound, 4 ounce tube	1
3614752C1	Dual saddle swivel guide	1
3551709C1	Cable strap 9 in. x 0.303 in.	4
Kit 8900223R91 Contains the Following Parts:		
PART NUMBER	PART DESCRIPTION	QUANTITY
289862C1	Cable strap	1
3545771C1	Saddle	1
25483R1	Saddle bolt	1
120380	Saddle lock washer	1
25519R1	Saddle nut	1
922860R1	Extension bracket	1
31054R1	Fuel case bolt*	1
25708R1	Fuel case washer*	1
*There is no need to utilize the fuel case bolt and washer in this procedure.		

SERVICE PROCEDURE

WARNING!

PARK VEHICLE ON HARD FLAT SURFACE, TURN THE ENGINE OFF, SET THE PARKING BRAKE, AND BLOCK THE WHEELS TO PREVENT THE VEHICLE FROM MOVING IN BOTH DIRECTIONS. FAILURE TO DO SO MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, AND/OR DEATH.

WARNING!

IF THE VEHICLE MUST BE RAISED, DO NOT WORK UNDER THE VEHICLE SUPPORTED ONLY BY JACKS. JACKS CAN SLIP OR FALL OVER, POTENTIALLY RESULTING IN PROPERTY DAMAGE, PERSONAL INJURY, AND/OR DEATH.

WARNING!

ALWAYS WEAR SAFE EYE PROTECTION WHEN PERFORMING VEHICLE MAINTENANCE. FAILURE TO DO SO MAY RESULT IN SERIOUS EYE INJURY.

WARNING!

ALLOW COMPONENTS IN ENGINE COMPARTMENT TO COOL BEFORE SERVICING ENGINE OR VEHICLE. FAILURE TO DO SO MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, AND/OR DEATH.

REPAIR PROCEDURES

1. Open battery compartment, disconnect both the frame and starter negative battery cables, and the Clean Power harness connector.
2. Inspect the fuel case area (close to the power steering pump) to see if an extension bracket, saddle, and cable strap has already been installed as shown in Figure 1. If the extension bracket is present, remove the fuel case bolt that secures it and cut the cable strap that is securing the alternator harness. Go to step 4 and re-use the extension bracket.

If the extension bracket is currently installed on the fuel case, proceed to step 3.

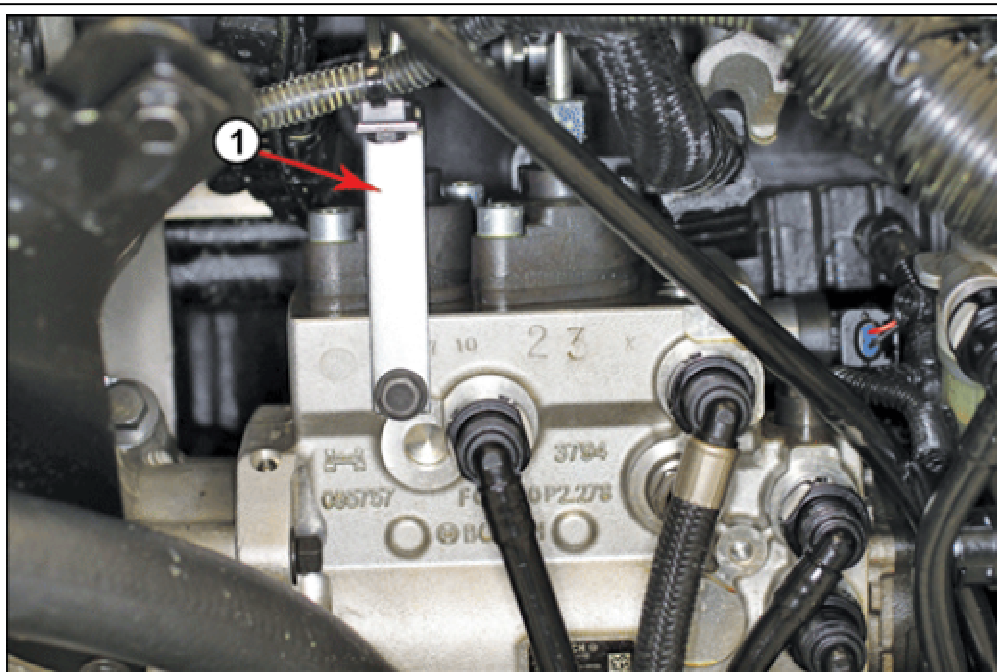
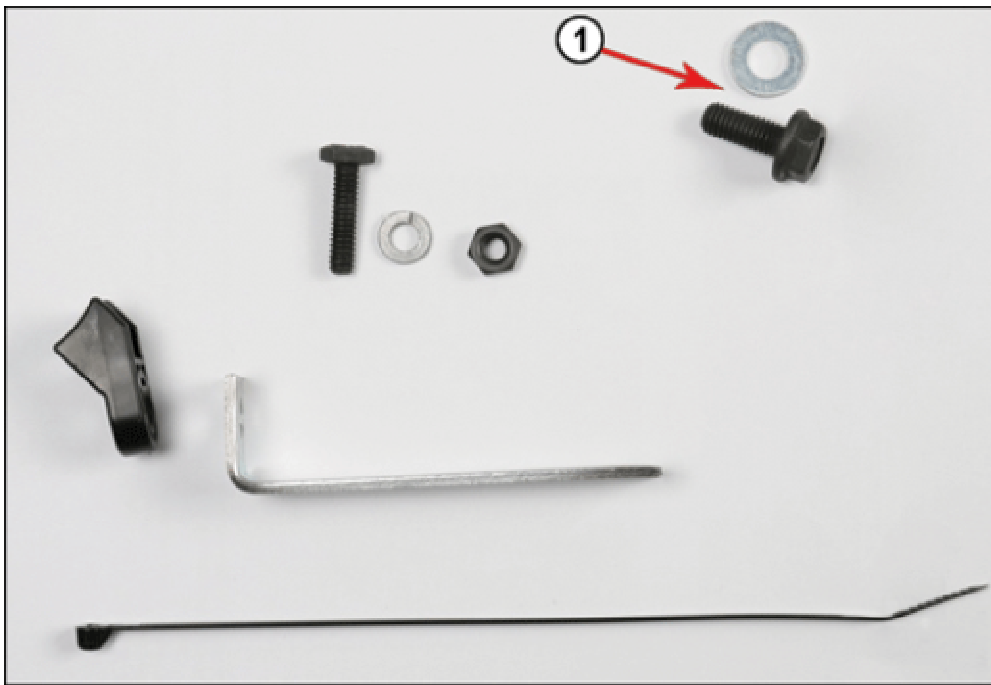


Figure 1

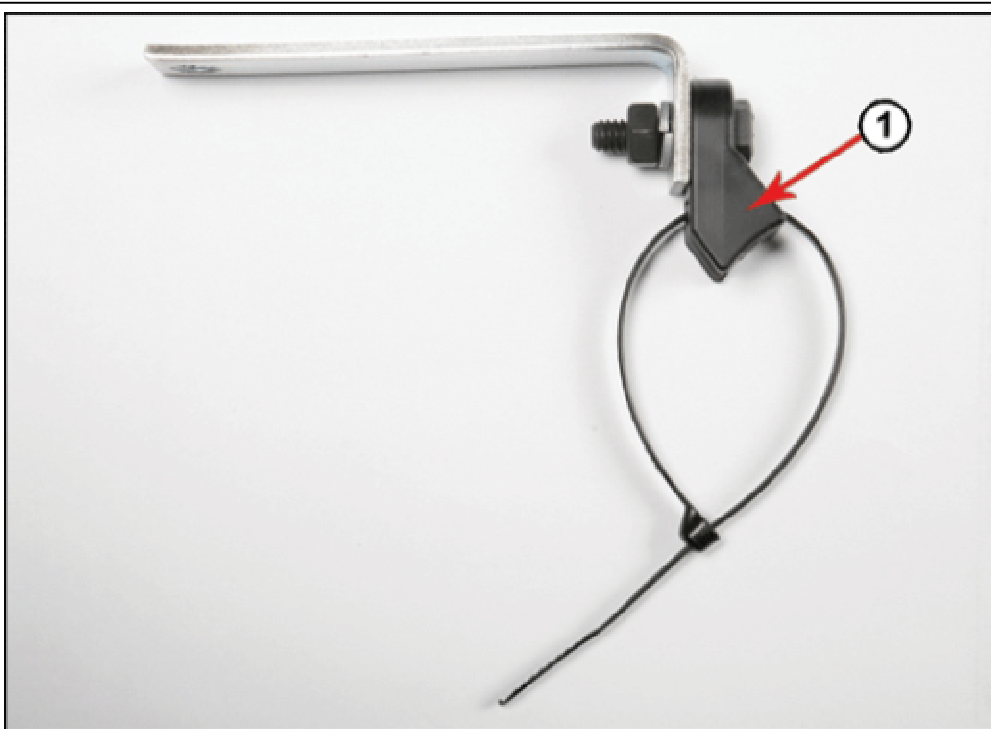
1. Extension bracket may already be mounted to the fuel case.

3. Assemble hardware (Figure 2) to match Figure 3. Attach saddle (3545771C1) to extension bracket (922860R1) and secure with saddle bolt (25483R1) using saddle lock washer (120380) and saddle nut (25519R1).



**Figure 2**

1. Fuel case bolt and washer NOT needed.

**Figure 3**

1. Alternator cables need to be strapped to the curved surface of the saddle strap.

4. Remove dipstick bracket attachment bolt (Figure 4).



Figure 4

1. Dipstick bracket attachment bolt.

5. Remove the alternator harness attachment nut (Figure 5).

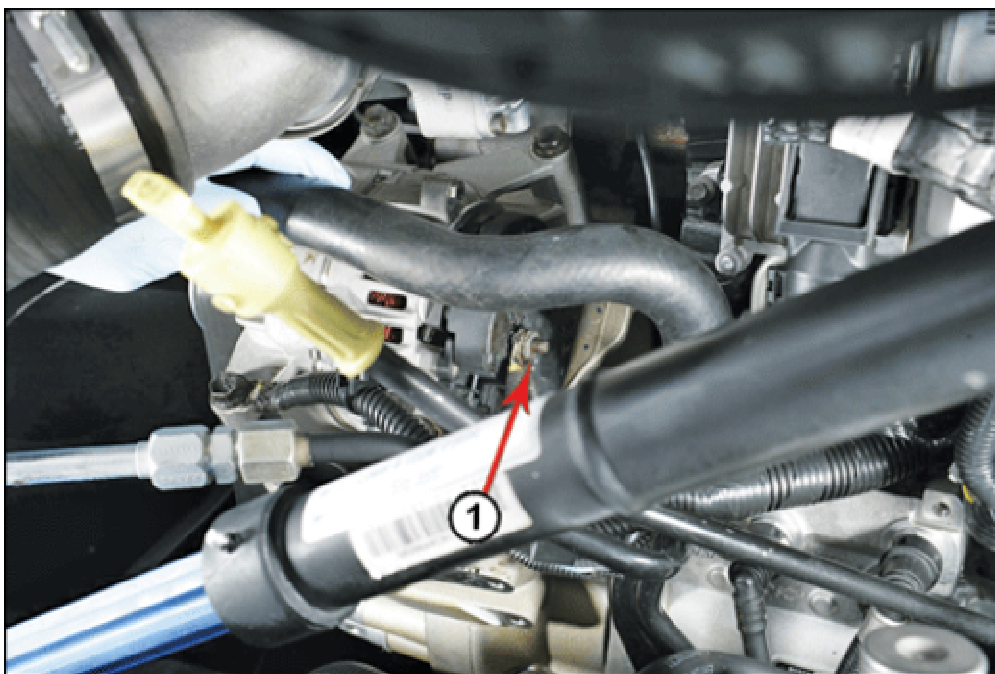


Figure 5

1. Alternator harness attachment nut.

6. Remove the alternator mounting bolt that secures the ground cable of the alternator harness (Figure 6).

Reinstall the bolt and tighten to 19-23 ft-lb (26-31 N·m) as the ground harness will be relocated in a later Step.

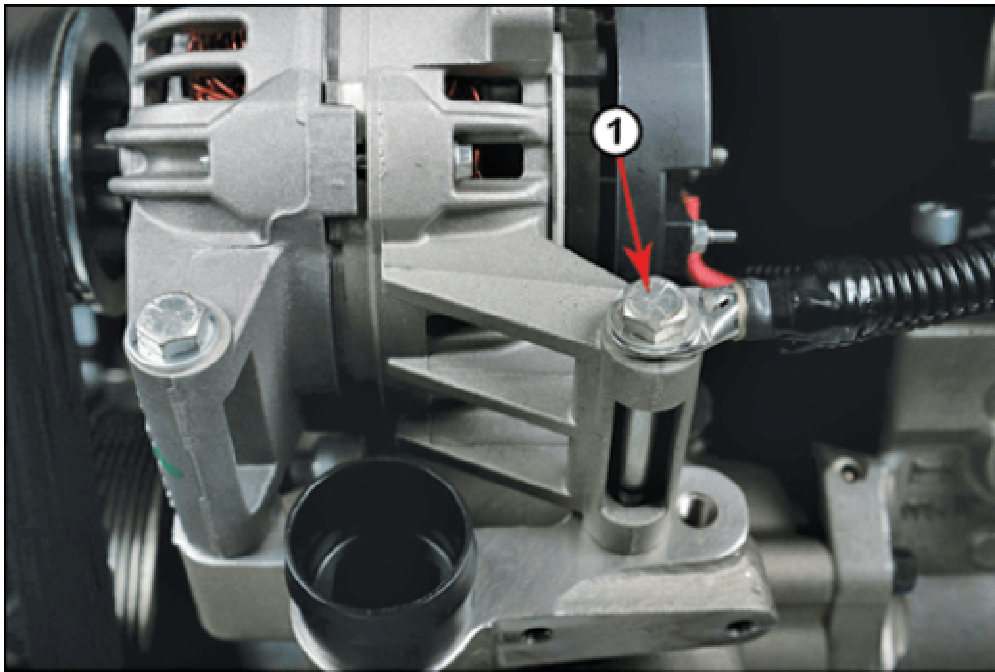


Figure 6

1. Alternator mounting bolt.

7. Remove alternator harness ends from the alternator so the alternator cables can be re-routed (Figure 7).

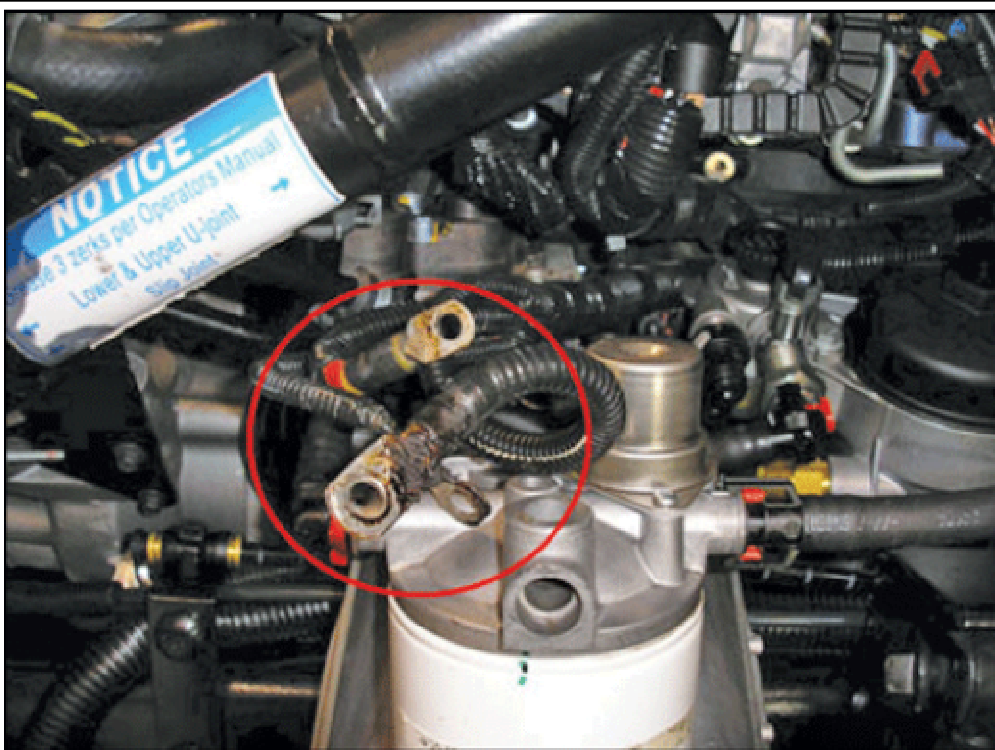


Figure 7

8. Use the same attachment bolt removed in Step 4 to attach the extension bracket (922860R1) to dipstick bracket (Figure 8). Verify the extension is placed at a similar angle (Figure 9).

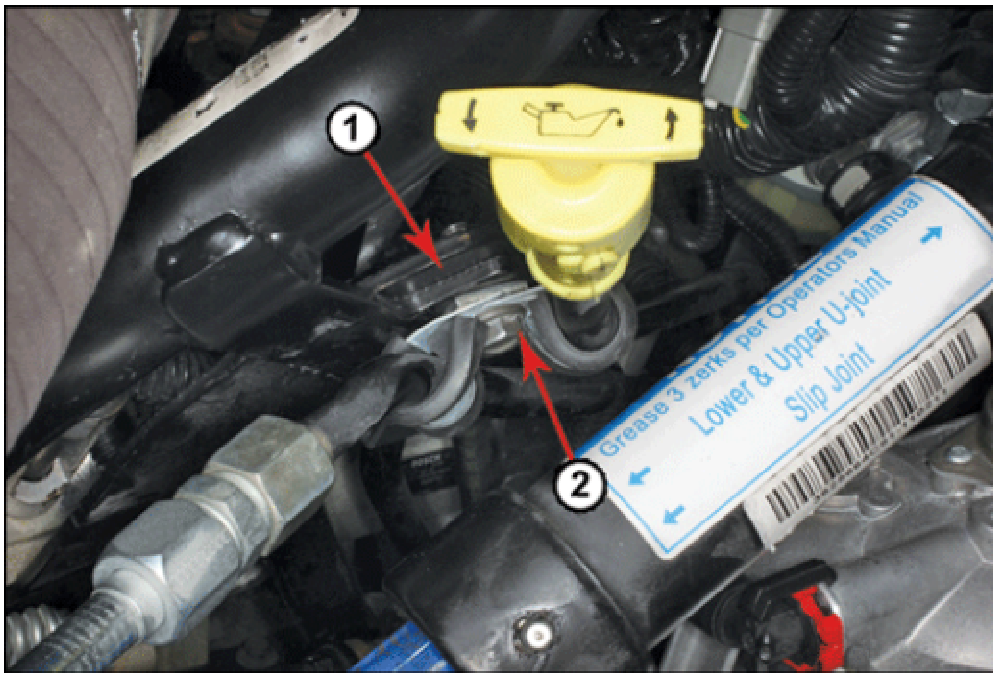


Figure 8

1. Extension bracket is underneath the P-clamps.
2. Same bolt used.

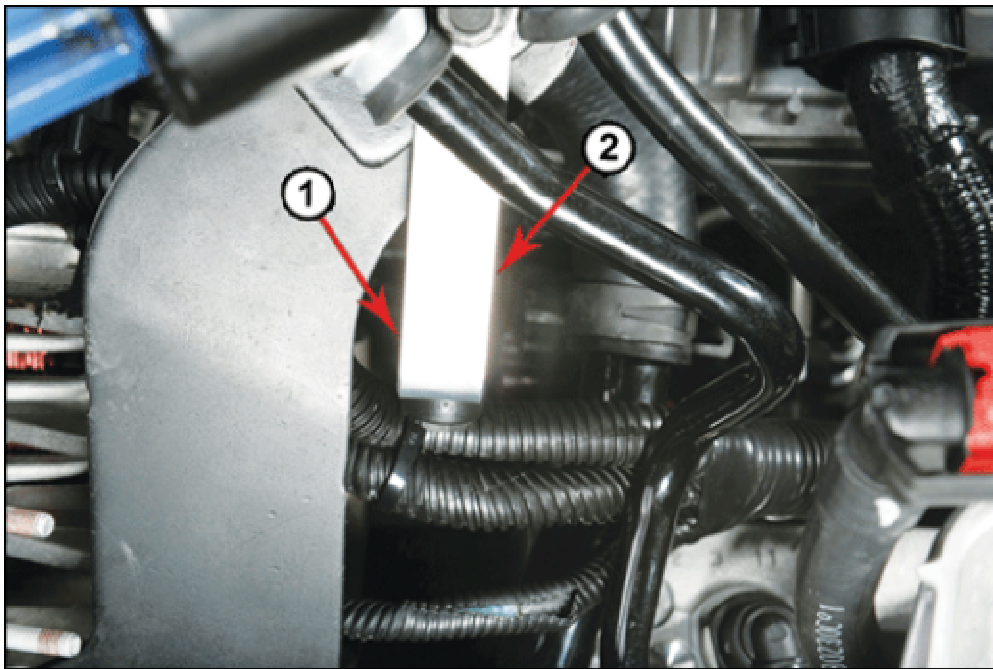


Figure 9

1. Extension bracket faces in toward engine compartment.

2. Notice the angle and location of the extension bracket.

9. Reroute the alternator harness to the outside of the power steering hose and above the power steering high-pressure line. Attach the alternator harness to the saddle (3545771C1) using the cable strap (289862C1). Tighten the cable strap and cut off the excess strap (Figure 10).

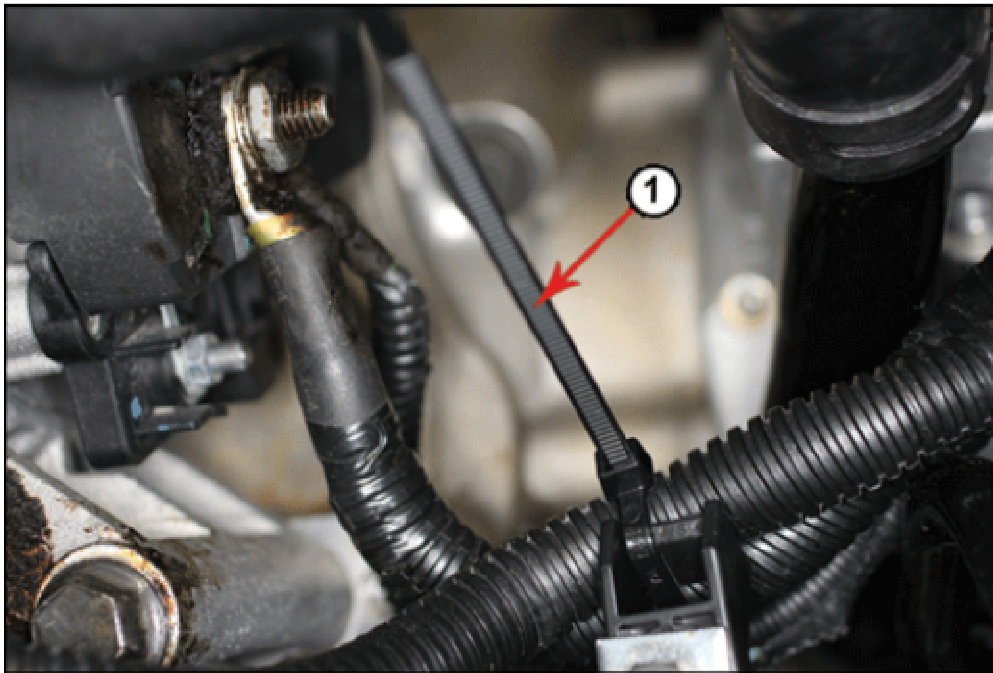


Figure 10

1. Adjust cable strap to saddle and cut off excess cable strap.

10. Locate and remove the existing cable strap or straps that secure the alternator harness, ECM-to-sensor harness, and chassis-to-ECM harness to the cast-in strain-relief bracket (Figure 11).

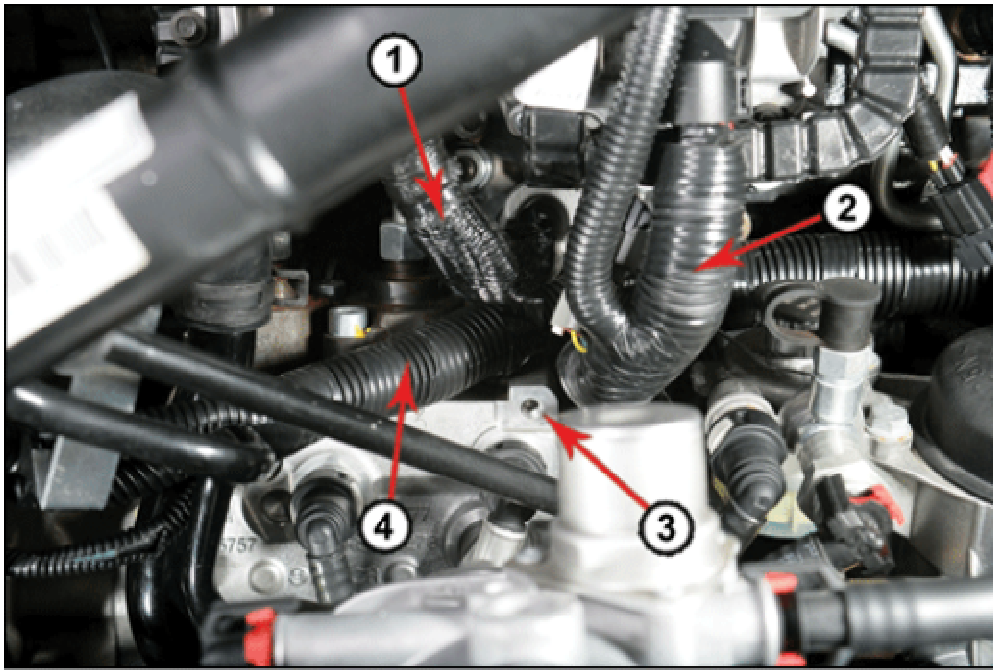


Figure 11

- | |
|---------------------------|
| 1. ECM-to-Sensor harness |
| 2. Chassis-to-ECM harness |
| 3. Pump screw boss |
| 4. Alternator harness |

11. Insert a new cable strap around the strain-relief bracket and around the alternator harness and the ECM-to-sensor harness and tighten the cable strap enough to lift the harnesses off of the pump screw boss (Figure 11 and Figure 12).

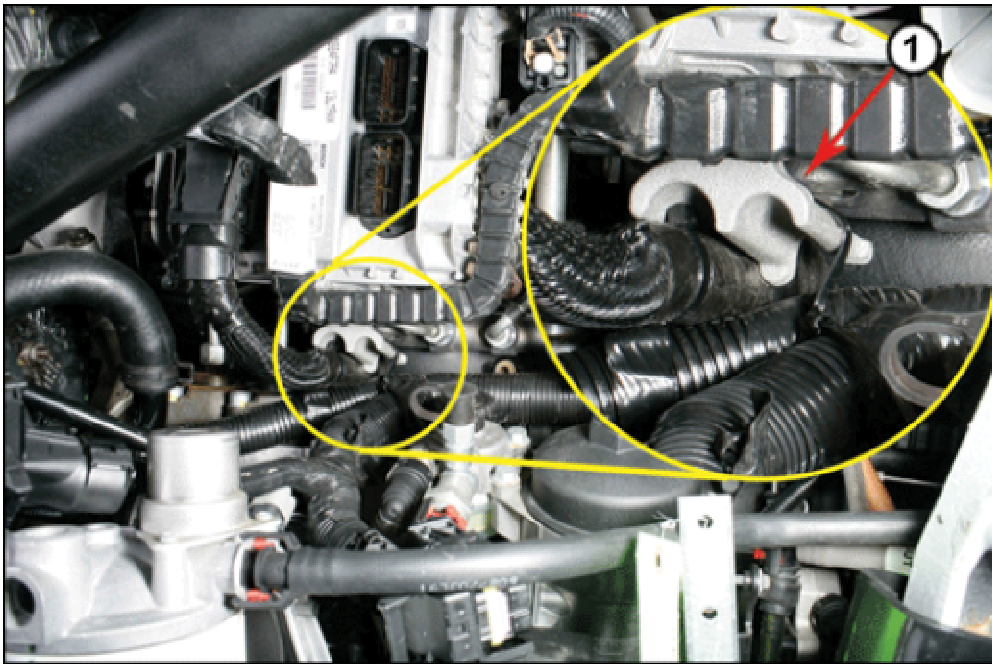


Figure 12

1. Strain relief location.

12. Insert a second cable strap around the strain-relief bracket and around the chassis-to-ECM harness and tighten the cable strap enough to lift the harness off the pump screw boss (Figure 13).

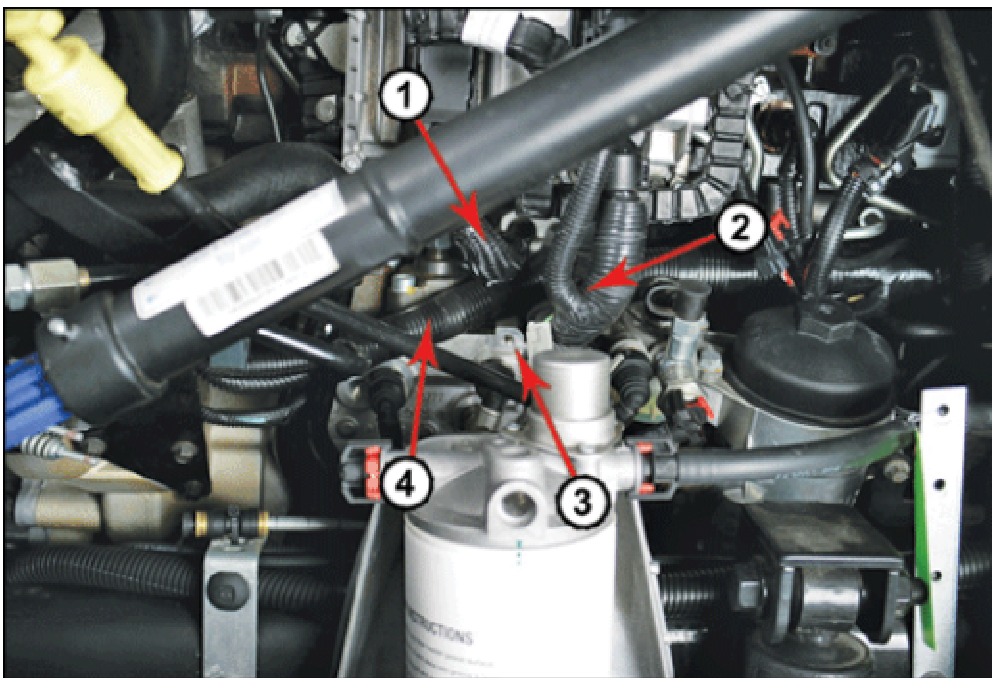


Figure 13

1. ECM-to-Sensor Harness

2. Chassis-to-ECM Harness

- | |
|-----------------------|
| 3. Pump screw boss |
| 4. Alternator Harness |

13. Verify proper clearance, adjust if necessary to obtain proper clearance, and then cut off the extra cable strap ends.

14. Remove the lower front alternator-mounting bolt, install the bolt through the ground terminal of the alternator harness, and reinstall the bolt (Figure 14). Tighten to 19-23 ft-lb (26-31 N·m). If there is insufficient length to reach the front bolt location of the alternator, then use the rear bolt location. Apply sealant to the bolt head after installation.



Figure 14

- | |
|--|
| 1. Lower front alternator-mounting bolt. |
|--|

15. Reinstall the power cable of the alternator harness to the positive terminal of the alternator. Tighten nut to 120 in-lb (13.5 N·m). Apply sealant to the nut after installation (Figure 15).

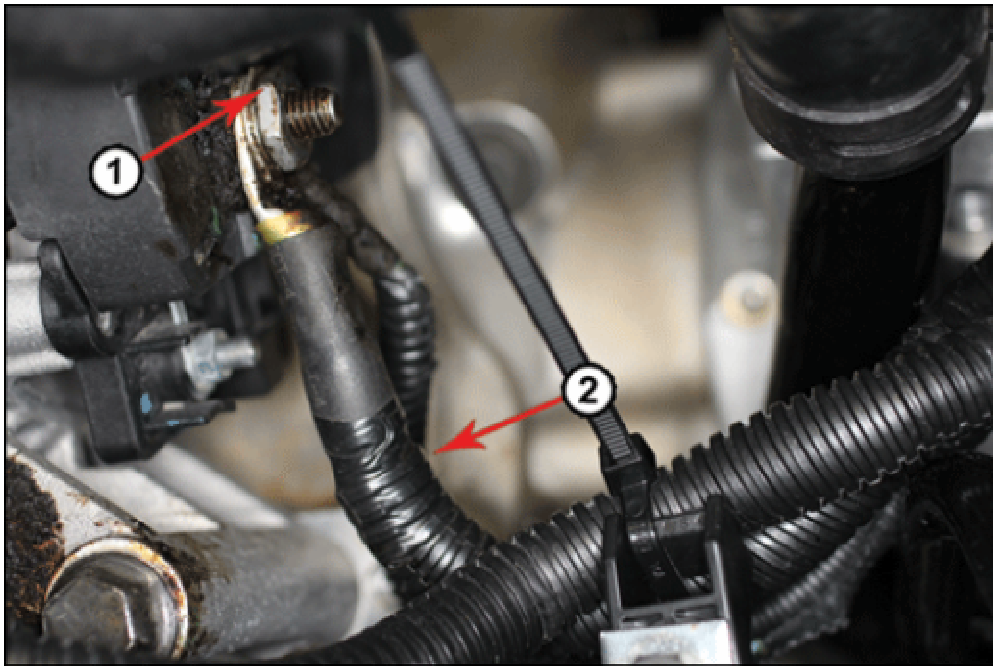


Figure 15

1. Positive Terminal

2. **NOTE:** There should not be any extreme bends when the cables are mounted on the alternator.

16. Add a dual-saddle swivel guide (3614752C1) between the power steering hose and the alternator ground harness by using two 9 in. cable straps (3551709C1) to the area shown in Figure 16 and Figure 17.

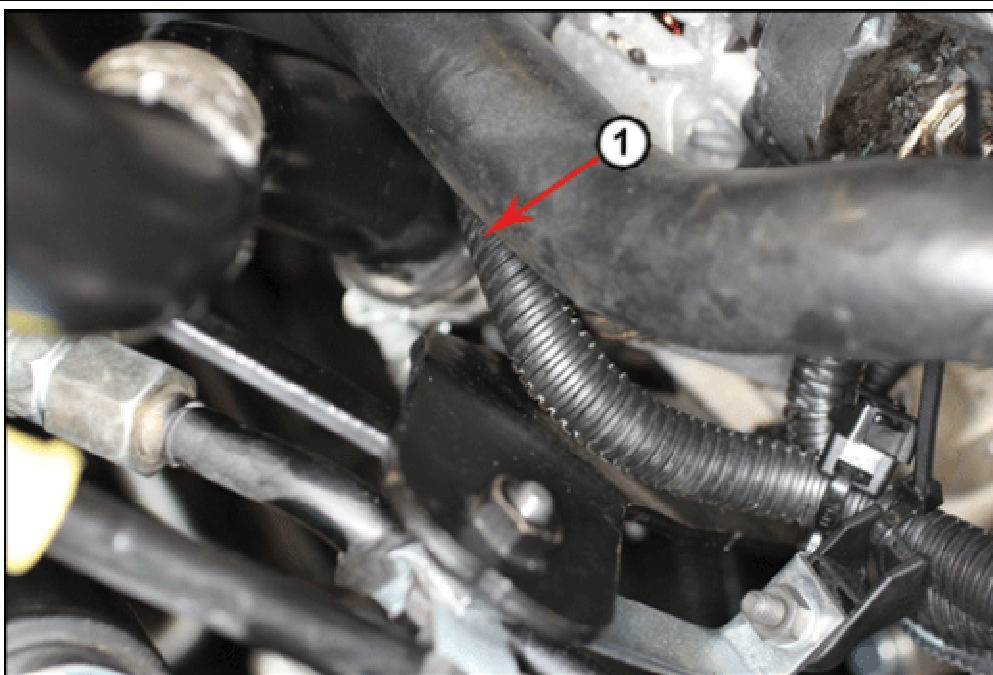


Figure 16

1. Add dual swivel to this area

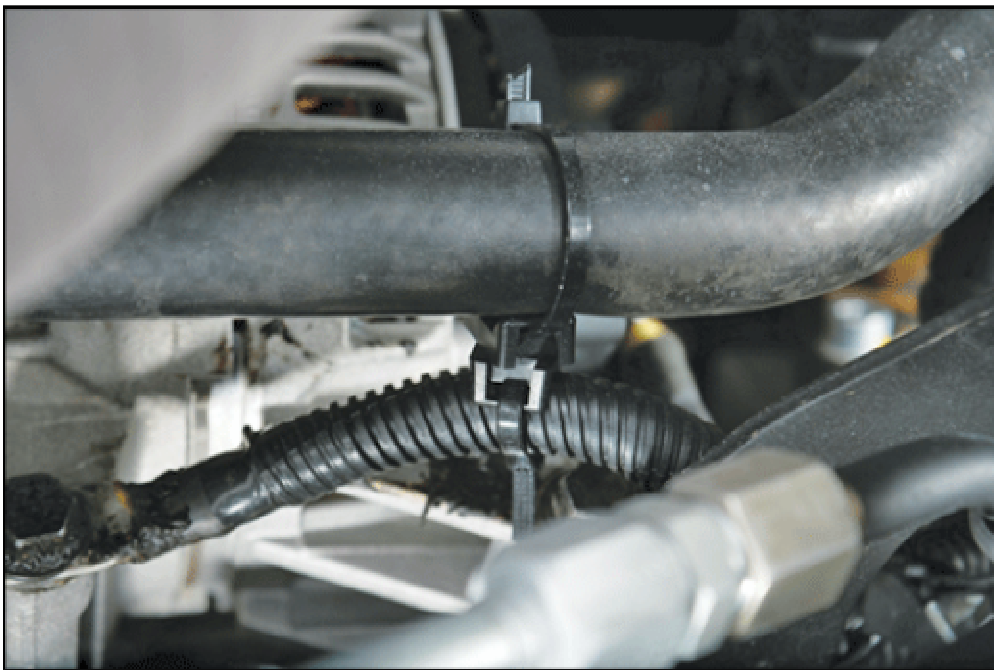


Figure 17

17. Cut off the excess cable strap and make sure the power steering hose does not rub against the alternator ground harness.

18. Pull the cable strap tight and cut off excess length. Inspect the re-routed alternator harness and make sure the alternator harness does not rub on the ECM, Power Steering hose, or other objects. Adjust the extension bracket bolt angle (Figure 9), if needed.

WARRANTY INFORMATION

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner as Warranty Code 40, Group 12643. It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8. As with all claim submission, items acquired locally must be submitted in the .Other Charges. tab. The cost of any bulk items (bag of cable tie straps, roll of wire, barrel of oil, tube of silicone, etc.) should be prorated for the cost of the individual pieces/amount used during each repair.

GROUP	NOUN	C	WARR.	TP	PAD
GROUP _____	NOUN _____	C (CAUSE) Enter either 1, 2, 3. (see below)	WARRANTY (Warranty Code) _____	TYPE PART Enter P for type part causing failure. _____	PAD Enter 100 _____
		1. Inspected (No repair required).			
		2. Inspected and repaired.			
		3. Defective part from parts stock.			

Warranty Claim Information					
Group	Noun	Cause (C)	Warranty Code	Description	Time (hrs)
12643	Blank	2	40	Alternator wiring re-route	As needed by SRT below

Standard Repair Time		
Operation Number	Description	Time (hrs)
A08T1	Alternator Wiring Re-route - install kit	0.5

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Feedback Information

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No Feedback Found