

# Authorized Field Change



**AFC 13916**

**Date:** February 2014  
**Subject File:** Electrical

**Subject:** MaxxForce® 15 Powertrain Harness Chafing

Model: ProStar®+  
Start Date: 14 January 2011 End Date: 14 August 2012  
Engine Family: MaxxForce® 15

## DESCRIPTION

In certain ProStar®+ trucks with MaxxForce® 15 engines built 14 January 2011 through 14 August 2012, the connector backshell designed to hold the powertrain harness away from the Engine Control Module (ECM) bracket was not installed. Because the backshell is missing, the powertrain harness may rub on the ECM bracket and damage the wires, causing them to short circuit. Shorts in the powertrain harness may lead to the following problems:

- Backup light / alarm failure
- Inoperable A/C compressor
- Various fault codes
- Erratic engine behavior
- Missing gauge information

This AFC is applicable only to vehicles marked in International® Service Portal<sup>SM</sup> with AFC 13916.

## PARTS INFORMATION

**Table 1. Parts Information**

Part Number	Description	Quantity
8000959C91	Backshell Kit	1
Obtain Locally	Heat Shrink Tubing	As Needed
Obtain Locally	Circuit Wire	As Needed
Obtain Locally	Straps, Cable Tie	As Needed

## PARTS INFORMATION (CONT.)

Table 2. 8000959C91: Kit Contents

Part Number	Description	Quantity
3881687C1	42-Way Backshell	1
3820913C91	Fir Tree Strap	1

## 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 personal injury and / or death.



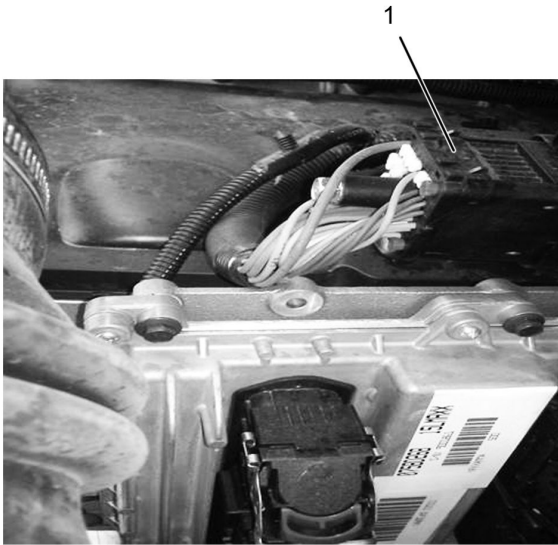
**WARNING:** Keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases. Failure to do so may result in property damage, personal injury, and / or death.



**WARNING:** Remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last. Failure to do so may result in property damage, personal injury, and / or death.

1. Bring truck into shop and park on flat surface.
2. Shift transmission to Park or Neutral, set parking brake, and install wheel chocks.
3. Unlatch and open hood.

## SERVICE PROCEDURE (CONT.)



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**Figure 1. Powertrain Harness 42-Way Connector without Backshell.**

1. Powertrain harness 42-way connector



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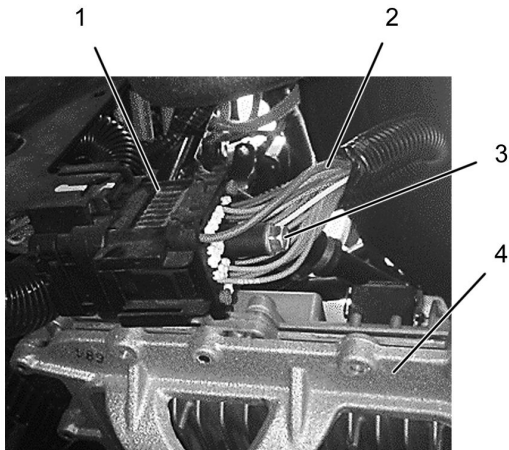
**Figure 2. 42-Way Connector.**

1. Backshell
2. 42-way connector

4. Inspect powertrain harness 42-way connector (Figure 1, Item 1) for backshell (Figure 2, Item 1).

## SERVICE PROCEDURE (CONT.)

- a. If backshell (Figure 2, Item 1) is present, proceed to Step 17.
  - b. If backshell is missing (Figure 1), proceed to Step 5.
5. Disconnect negative battery cable.

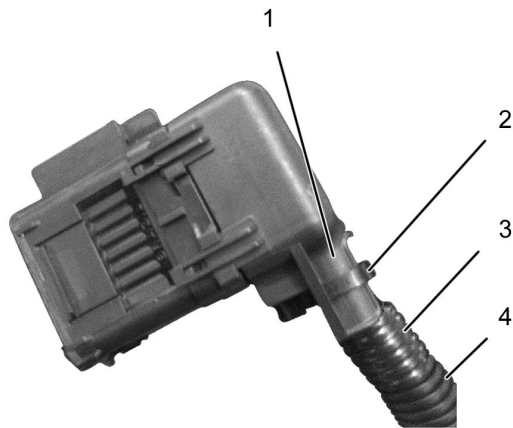


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**Figure 3. Powertrain Harness Connection.**

1. Powertrain harness 42-way connector
  2. Powertrain harness circuit wires
  3. Center post bolt
  4. ECM
6. Inspect powertrain harness circuit wires (Figure 3, Item 2) for signs of chafing at ECM (Figure 3, Item 4).
- a. If no chafing is found, proceed to Step 7.
  - b. If wires are chafed but copper is not exposed, install heat shrink over damaged circuit wires.
  - c. If wires are chafed and copper is exposed, follow steps below.
    1. Splice in new circuit wires.
    2. Install heat shrink over splices.
7. Disconnect powertrain harness 42-way connector (Figure 3, Item 1).
8. Remove center post bolt (Figure 3, Item 3).
9. Install backshell (Figure 2, Item 1).
10. Install center post bolt. Using torque wrench, tighten post bolt to 31 lb-in (2.6 N•m).

## SERVICE PROCEDURE (CONT.)



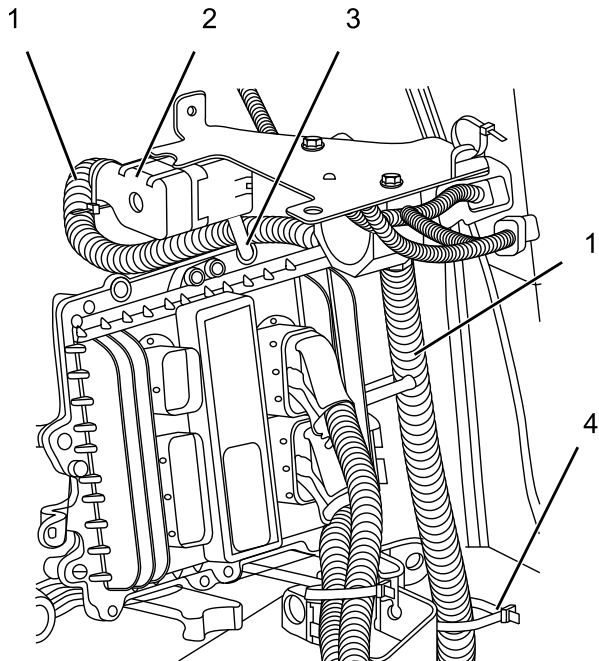
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**Figure 4. Repaired Powertrain Harness 42-Way Connector.**

1. Backshell body extension
2. Tie-wrap
3. Taped end
4. Convoluted tubing

11. If needed, add convoluted tubing (Figure 4, Item 4) to cover exposed harness wires up to backshell body extension (Figure 4, Item 1).
12. Tape joints and ends (Figure 4, Item 3) of convoluted tubing, if installed.
13. Tie-wrap (Figure 4, Item 2) backshell extension.

## SERVICE PROCEDURE (CONT.)



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**Figure 5. Powertrain Harness.**

- 1. Powertrain harness 42-way connector
- 2. Powertrain harness
- 3. Fir tree strap
- 4. Cable tie strap

- 14. Connect powertrain harness 42-way connector (Figure 5, Item 1).
- 15. Route powertrain harness (Figure 5, Item 2) toward cab and behind ECM as shown in Figure 5, and secure powertrain harness (Figure 5, Item 2) with fir tree strap (Figure 5, Item 3) and cable tie strap (Figure 5, Item 4).
- 16. Connect negative battery cable.
- 17. Close and latch hood.
- 18. Remove wheel chocks.

## LABOR INFORMATION

Operation number must appear on all claims.

**Table 3. Labor Information**

Operation No.	Description	Time
A40-13916-1	Inspect Powertrain Harness 42-Way Connector for Backshell, Install Heat Shrink if Necessary, and Install Backshell	0.5 hr
A40-13916-2	Inspect Powertrain Harness 42-way Connector for Backshell, Splice Circuits, and Install Backshell	1.0 hr

## ADMINISTRATIVE PROCEDURE

Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number 13916.

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 submissions, items acquired locally must be submitted in the “Other Charges” tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To ensure this important improvement is made in a timely manner, all claims for 13916 activity must be submitted by 30 November 2014 or within the normal warranty period for the vehicle, if after 30 November 2014.

GROUP	NOUN	C	WARR.	TP	PAD

GROUP — Enter number ←

NOUN — Leave blank ←

C (CAUSE) — Enter either 1, 2, 3. (See below)

- 1. Inspected (No repair required).
- 2. Inspected and repaired.
- 3. Defective part from parts stock.

WARRANTY — (Warranty Code) Enter 40. ←

TYPE PART — Enter P for type part causing failure. ←

PAD — Enter 100 ←

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