

# Authorized Field Change



AFC 12931

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**Date:** November 2012

**Subject File:** EXHAUST

**Subject:** Diesel Particulate Filter (DPF) Temperature Sensor Harness Reinstallation

Model: PB105 and PB405, BE and CE Bus

Start Date: 3 May 2012 End Date: 8 October 2012

Engine Family: 2010 MaxxForce® 7

## DESCRIPTION


The following procedures outline the process to install the jumper harness between the Diesel Particulate Filter (DPF) inlet and DPF outlet connectors. Repair consists of installing a jumper harness from the chassis harness DPF inlet connector to the DPF outlet sensor, and connecting the chassis harness DPF outlet connector to the DPF inlet sensor. This process will include connecting the unit to ServiceMaxx™ to verify signals are as expected after repair.


## PARTS INFORMATION


Table 1. [Parts Information](#)


Part Number	Description	Quantity
3993418C92	Harness, DPFT1 Sensor Jumper	1
306132C1	Strap, Tie	5

## 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.

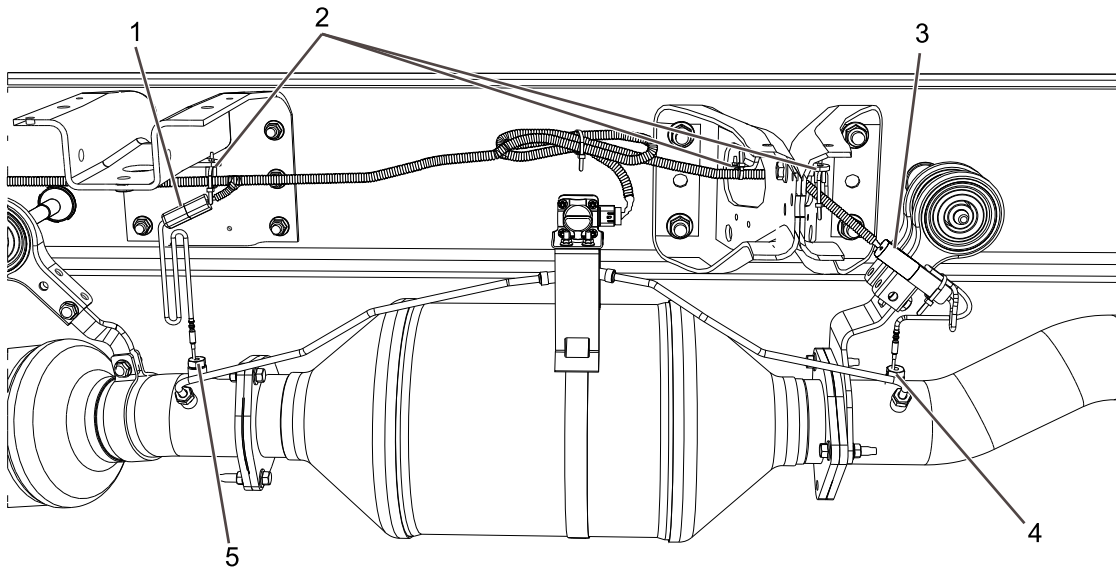
 **WARNING:** Always wear safe eye protection when performing vehicle maintenance. Failure to do so may result in serious eye injury.

 **WARNING:** 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.

1. Park vehicle on flat surface, shift transmission into park or neutral, and set parking brake.
2. Install wheel chocks.
3. Move under vehicle at DPF assembly and disconnect DPF outlet temperature sensor connector (Figure 1, Item 3).
4. Exit from under vehicle and enter unit. Open ServiceMaxx™ and turn ignition key ON.
  - a. If ServiceMaxx™ shows DTC SPN 3246 FMI 3 - DPFOT signal Out of Range HIGH and DPF Outlet Temp error, turn ignition key OFF and remove key to prevent unauthorized movement of vehicle. Reconnect DPF outlet temperature sensor connector (Figure 1, Item 3), enter unit, and turn ignition key ON. DTCs will show as previously active. Clear codes and take no further action.
  - b. If ServiceMaxx™ shows DTC SPN 3243 FMI 3 - DPFIT signal Out of Range HIGH and DPF Inlet Temp error, turn ignition key OFF and continue with this procedure.

## SERVICE PROCEDURE (CONT.)

5. Remove existing tie straps (Figure 1, Item 2) from right-side frame rail at DPF inlet sensor connector, right-side frame rail forward of cross member at rear of DPF, and right-side frame rail rear of cross member above DPF outlet sensor.
6. Reroute DPF outlet chassis harness connector (Figure 1, Item 3) through right-side chassis cross member toward DPF inlet temperature sensor (Figure 1, Item 5).
7. Disconnect DPF inlet temperature sensor (Figure 1, Item 5) from chassis harness connector (Figure 1, Item 1) and connect DPF inlet sensor connector to DPF outlet chassis harness connector (Figure 1, Item 3).



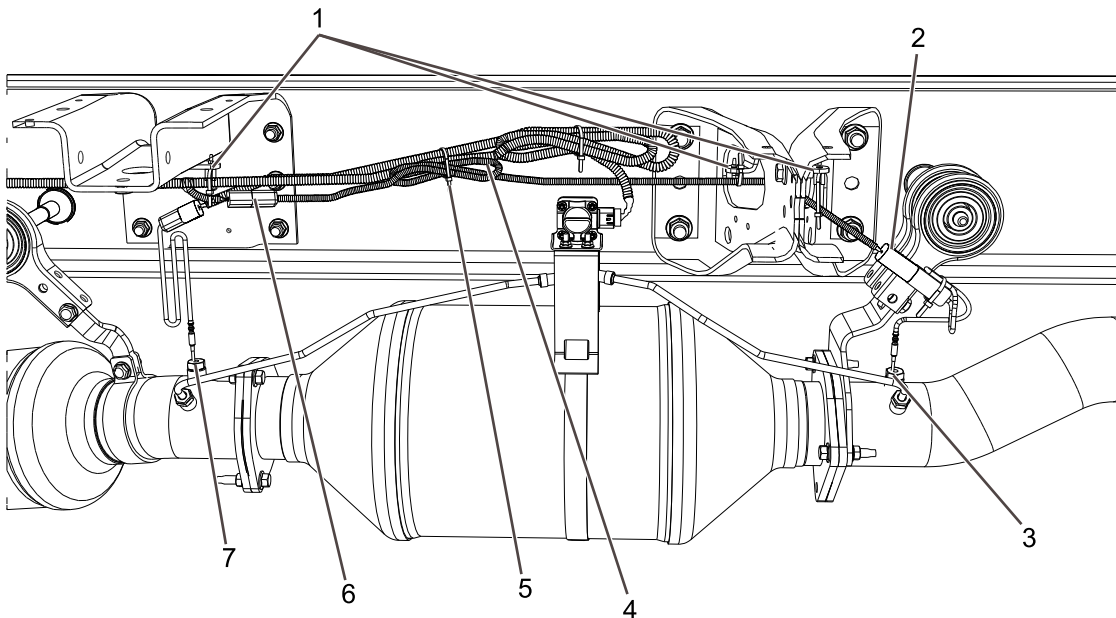
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**Figure 1. DPF Harness: Original Installation.**

1. DPF inlet chassis harness connector
2. Tie strap (3)
3. DPF outlet chassis harness connector
4. DPF outlet sensor
5. DPF inlet sensor

## SERVICE PROCEDURE (CONT.)

8. Connect jumper harness (Figure 2, Item 4) to DPF inlet chassis harness connector (Figure 2, Item 6).
9. Route jumper harness (Figure 2, Item 6) through right-side chassis cross member to DPF outlet sensor (Figure 2, Item 3).
10. Connect jumper harness connector (Figure 2, Item 2) to DPF outlet temperature sensor (Figure 2, Item 3).
11. Install tie strap securing jumper harness at right-side frame rail rear of cross member above DPF outlet sensor (Figure 2, Item 1). Position jumper harness connector (Figure 2, Item 2) to allow adequate slack and tighten tie strap.
12. Install tie strap securing jumper harness at right-side frame rail forward of cross member above DPF assembly (Figure 2, Item 1) and tighten tie strap.
13. Install tie strap at DPF inlet sensor connector (Figure 2, Item 1). Adjust all harnesses to ensure appropriate slack forward of this clipping point and to sensor. Tighten tie strap.
14. Remaining jumper harness and chassis harness must be bundled and clipped using an additional tie strap (Figure 2, Item 5).



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**Figure 2. DPF Harness: Modified Installation.**

1. Tie strap (3)
2. DPF outlet sensor connector
3. DPF outlet sensor
4. Jumper harness
5. Tie strap
6. DPF inlet sensor connector
7. DPF inlet sensor

## SERVICE PROCEDURE (CONT.)

15. Secure bundled harnesses at current right-side frame rail clipping point and forward of this point with tie straps to properly retain bundled harnesses.
16. Trim all installed tie straps.
17. Make sure all connectors are installed and locked. Verify installation results have not decreased clearance between DPF and bundled harnesses and have not introduced abrasion points.
18. Exit from under unit. Enter unit, open ServiceMaxx™, and turn ignition key ON. ServiceMaxx™ will no longer show an error for DPF Outlet Temp and will issue the following DTCs as previously active codes:
  - a. DTC SPN 3246 FMI 3: DPFOT signal Out of Range HIGH
  - b. DTC SPN 3246 FMI 10: DPFOT signal abnormal rate of change
19. Clear all DTCs in ServiceMaxx™.

**NOTE: If ignition key was left ON during jumper harness installation, additional DPFIT and DPFOT DTC codes will be present. To ensure all codes are corrected, turn ignition key OFF for 3–5 seconds and then turn key ON. All codes should be listed as previously active.**

**NOTE: If present, DTC 3246 10 will stay active until an ignition key cycle.**

20. Turn ignition key OFF and disconnect ServiceMaxx™.

**NOTE: If other DTCs are present, perform basic diagnostics and open Tech Service case file if further directions are required.**

21. Remove wheel chocks.

## LABOR INFORMATION

Operation number must appear on all claims.

**Table 2. Labor Information**

Operation No.	Description	Time
A40-12931-1	Inspection only; Repair Not Required/Jumper Harness Previously Installed	0.2 hr
A40-12931-2	Install DPFT1 Sensor Jumper Harness	0.4 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 G-12931.

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 G-12931 activity must be submitted by 20 November 2013 or within the normal warranty period for the vehicle, if after 20 November 2013.

