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Revision _ : This document supersedes previous revisions.
No revision yet

NOx SENSOR REPLACEMENT – SCR INLET & OUTLET Prevost vehicles

DESCRIPTION

On the vehicles affected by this bulletin, replace the existing inlet & outlet NOx sensors by the latest NOx sensors.

Refer to appended Volvo service bulletins if needed.

MODEL YEAR(S) AND VEHICLES INVOLVED

NOTICE TO SERVICE CENTERS	
Verify vehicle eligibility by checking warranty bulletin status with SAP or via ONLINE WARRANTY SYSTEM available on Service / Warranty tab of Prevost website.	
Model	VIN
X3-45 coaches Model Year : 2011 - 2012	From 2PCG33491BC73 <u>5050</u> up to 2PCG33491CC73 <u>5132</u> incl.
This bulletin does not necessarily apply to all the above-mentioned vehicles, some vehicles may have been modified before delivery. The owners of the vehicles affected by this bulletin will be advised by a letter indicating the Vehicle Identification Number (VIN) of each vehicle concerned.	

MATERIAL NEEDED

Order the following parts:

Part No.	Description	Qty
21636091	SENSOR, INLET	1
22014032	SENSOR, OUTLET	1

SPECIAL TOOL REQUIRED

7/8-22mm oxygen sensor socket



NOTE

Material can be obtained through regular channels.

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PROCEDURE



DANGER

Park vehicle safely, apply parking brake, stop engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

INLET NOx SENSOR

Inlet NOx Sensor Removal and Installation (located at the DPF outlet pipe)

1. Locate the inlet NOX sensor located in the compartment above the rear doors looking up the coach, simply insert flat screw driver in the latch located inside the rear doors at the top and pull down until door pops then pull out and secure with hinge.
2. The inlet NOX sensor is located on the exhaust pipe furthest to the right with the exhaust cover towards the rear wall located in the compartment just above the rear facing door.
3. Move the exhaust cover on the exhaust pipe housing the NOX sensor so that the exhaust covers out of the way of being able to remove and replace the NOX sensor and so NOX is visible.
4. Locate, cut (with wire Snips) and remove the 5 securing zip ties that are holding the NOX wire from coming in contact with the exhaust pipe.
 - 2 located on the NOX Sensor bracket that is bolted to the NOX Sensor.
 - 1 zip tie holding the NOX wire to the bracket that comes off of the DPF clamp.
 - 1 zip tie securing the NOX wire to the existing wire.
 - 1 zip tie to the right of the mounting location of the NOX sensor control module.
5. Loosen up the 7mm bolt and fully remove the NOX sensor bracket clamped around the NOX sensor housing (keep track of the parts as this bracket and 7mm bolt will be reused).
6. With the 7/8 – 22mm oxygen sensor socket loosen up and remove the NOX sensor from the exhaust Pipe.
7. Locate the NOX sensor control module found just inside of the rear facing doors looking up towards the DPF filter; unplug the grey plug from grey connector making sure not to break connector B96:J1. Remove the two 10mm bolts holding the NOX sensor control module to the existing bracket.
8. Remove the NOX sensor/ control module from the bus visually inspecting the way the NOX wires are ran for reinstalling purposes of the new sensor.

Reinstalling inlet NOX Sensor

1. Start off by making sure new NOX sensor is correct for the NOX sensor being replaced.
2. Fish the NOX sensor and wires through the passage in which it was removed starting from the NOX sensor control module securing location, towards the exhaust pipe hung in which the sensor is located.
3. Install the two existing 10mm bolts securing the NOX control Module to securing location.
4. Reconnect grey plug or connector (B96 J1) to the sensor control module.

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5. Install the new NOX sensor into the existing exhaust hung located on the rear of the pipe and tighten using the 7/8- 22 mm oxygen sensor socket.
6. Reattach the NOX sensor bracket removed earlier from the NOX sensor by the 7mm bolt (position the bracket on the NOX sensor housing and not the wires) the bracket bend should be facing towards the driver's side of the coach.
7. Install the 5 new zip ties in the same position as removed from the old sensor;
 - 2 on the NOX sensor bracket.
 - 1 holding the NOX wire to the bracket coming off the DPF clamp.
 - 1 holding the NOX wire to the existing wire ran through this compartment.
 - 1 on the NOX control module securing the bracket.
8. Trim all the excessive zip tie material using wire snips.



OUTLET NOx SENSOR

Outlet NOX sensor Removal and installation (located on the SCR catalytic converter)

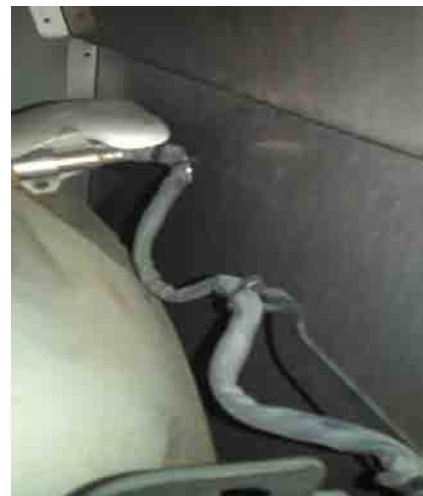
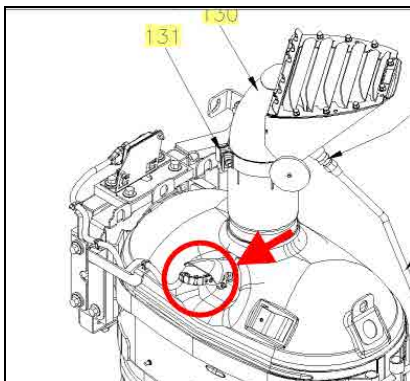
1. Locate the outlet NOX sensor location compartment (located in the upper exhaust access panel located on the driver rear side of coach above the access door for the charge air/radiator compartment). Access knob to get the compartment door to pop is located in the radiator/charge air cooler compartment towards the top).

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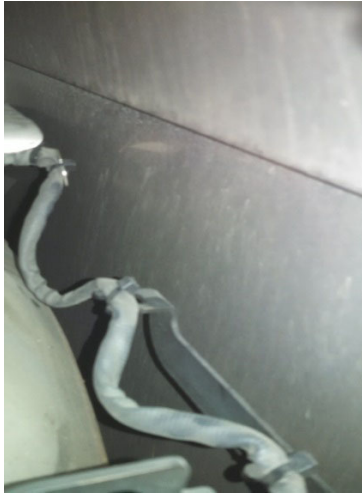
2. After locating the NOX sensor and control module start off by finding and cutting (with wire snips) the 5 securing zip ties holding the NOX wires from coming into contact with the exhaust pipe (2 on the NOX sensor bracket, 2 attaching the NOX wire to bracket running along inside rear cap and 1 securing the NOX wire to the existing wire found in this compartment).
3. Remove the NOX sensor bracket that is attached to the NOX sensor itself by the 7mm bolt reaching around the NOX sensor control module securing location to get to it. Fully remove the 7mm bolt and the NOX sensor bracket saving it so it can be reused on the new NOX sensor.
4. Remove the NOX sensor from the exhaust pipe bung using a 7/8-22mm oxygen sensor socket.
5. Unplug the black connector (B96B (DL7)) from the NOX sensor control module being careful not to break the connector. Remove the two 10mm bolts securing the control module to the securing bracket. Remove the whole NOX sensor unit, visually inspecting how NOX wires are ran for reinstalling purposes.

Reinstalling Outlet NOX Sensor

1. Install new NOX sensor verifying that the part is compatible with the part removed; install the two 10mm bolts securing the NOX sensor control module to its securing location.
2. Plug the black connector (B96B) (DL7) into the NOX sensor control module.
3. Install the new NOX sensor into the exhaust bung on the exhaust pipe and tighten with the 7/8-22mm oxygen sensor socket.
4. Reinstall the NOX sensor bracket making sure to secure it to the NOX sensor housing and not the wires. The bracket must face the driver's side of the coach to be able to zip tie the NOX wire in place.
5. Install the 5 securing zip ties, 2 on the NOX sensor bracket, 2 on the bracket running on inside of the rear cap and 1 zip tie to secure the NOX wires to the exiting wires already there.
6. Cut all excess zip tie material off using the (wire snips).



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PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

ESTIMATED TIME

The time required to perform this special bulletin is approximately 1 hour.

OTHER

VBC Bulletin	N/A
Fail Code	04.04-1
Defect Code	09
System Condition	B
Causal Part	21567764

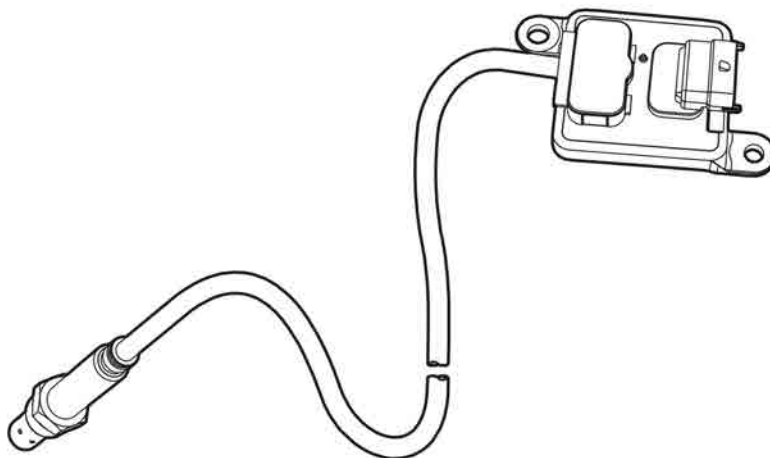
Prevost engages in a continuous program of testing and evaluating to provide the best possible product. Prevost, however, is not committed to, or liable for updating existing products.

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NOx Sensor and Control Module,
Replacement, Exhaust Outlet Pipe

PREVH, PREVX, B13R

NOx Sensor and Control Module, Replacement, Exhaust Outlet Pipe



W2006481

This information covers replacement of the outlet NOx sensor and control module used in the exhaust aftertreatment system on VOLVO model PREVH, PREVX, B13R buses.

Contents

- "NOX Sensor, Replacement", page 2

Note: Information is subject to change without notice.
Illustrations are used for reference only and can differ slightly from the actual engine version. However, key components addressed in this information are represented as accurately as possible.

Service Procedures

2589-03-02-10

NOX Sensor, Replacement

Exhaust Outlet Pipe

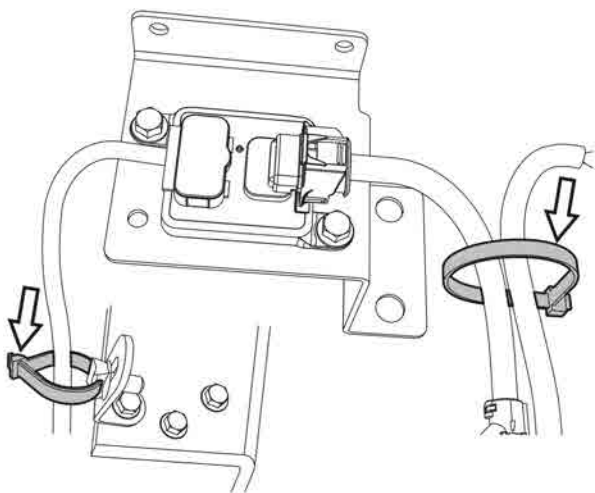
DANGER

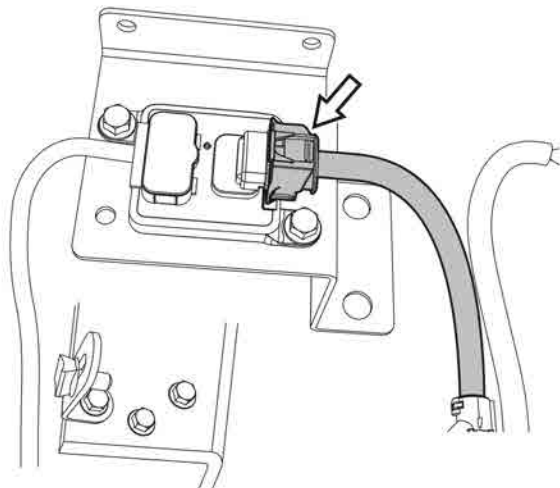
Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

You must read and understand the precautions and guidelines in Service Information, group 20, "General Safety Practices, Engine" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

Removal

- 1**
Open the rear engine service doors.
- 2**
Set the engine disable switch to "OFF".
- 3**
Open the left rear selective catalytic reduction (SCR) access door.
- 4**
Remove all tie straps that attach the harness connector and the sensor lead.

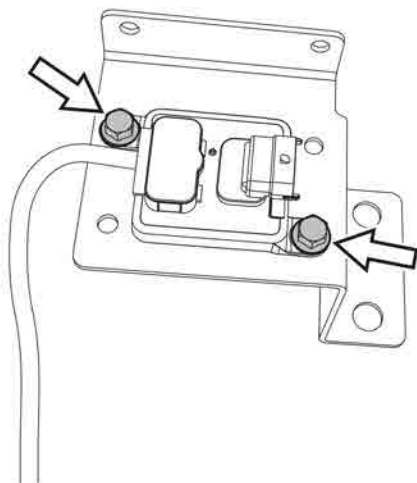




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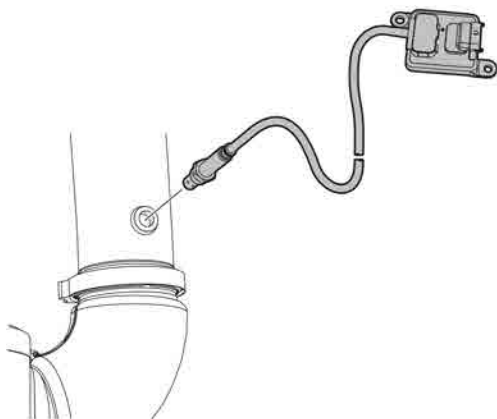
Disconnect the harness from the NOx control module.



W2006484

6

Remove the control module mounting fasteners.



W2006486

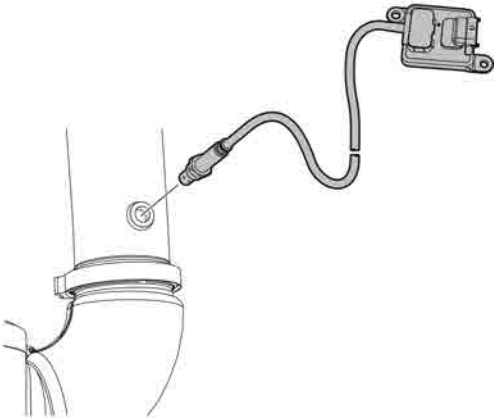
7

Remove the NOx sensor from the exhaust outlet pipe.

Installation

1

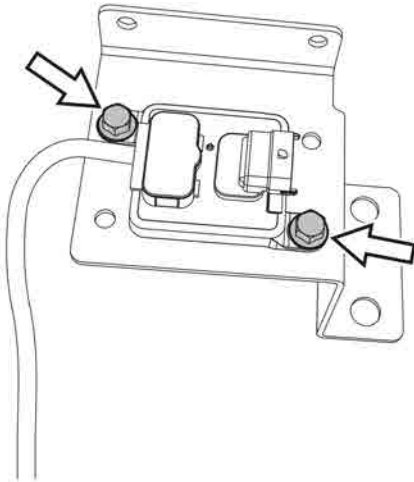
Install the replacement NOx sensor in the exhaust outlet pipe.



W2006486

2

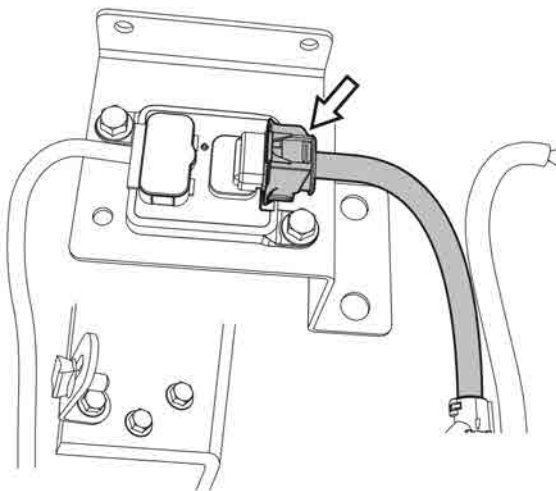
Install the control module mounting fasteners.



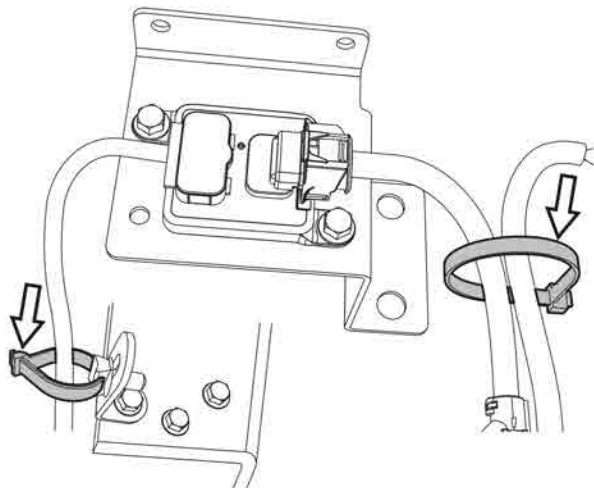
W2006484

3

Connect the harness to the control module.



W2006483



W2006482

4

Attach the harness and the sensor lead with tie straps.

5

Set the engine disable switch to "ON".

6

Connect the Tech Tool, clear diagnostic trouble codes (DTCs) and check operation.

7

Close the left rear selective catalytic reduction (SCR) access door.

8

Close the rear engine service doors.

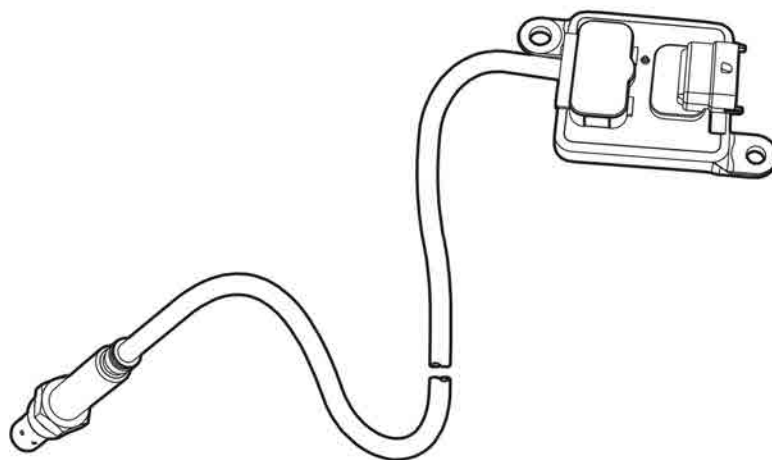
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NOx Sensor and Control Module, Replacement

Selective Catalytic Reduction (SCR) Inlet

PREVH, PREVX, B13R

NOx Sensor and Control Module, Replacement, Selective Catalytic Reduction (SCR) Inlet



W2006481

This information covers replacement of the NOx sensor and control module used in the exhaust aftertreatment system on VOLVO model PREVH, PREVX, B13R buses.

Contents

- “NOx Sensor and Control Module, Replacement”, page 2

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Service Procedures

2589-03-02-11

NOX Sensor and Control Module, Replacement

SCR Inlet

DANGER

Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

You must read and understand the precautions and guidelines in Service Information, group 20, "General Safety Practices, Engine" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

Removal

1

Open the rear engine service doors.

2

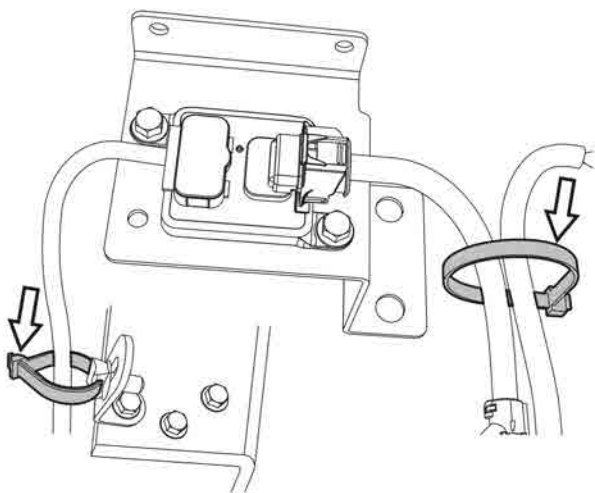
Set the engine disable switch to "OFF".

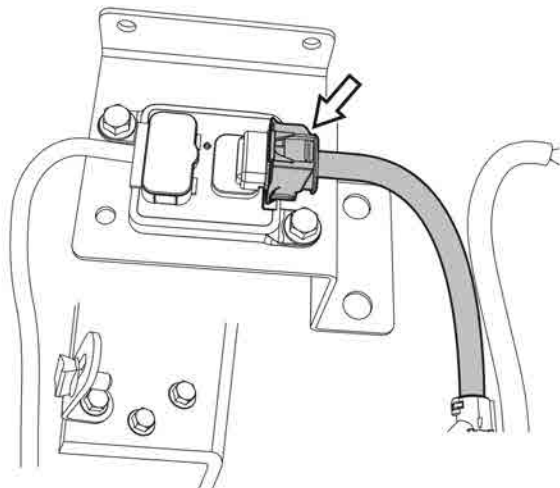
3

Remove the insulation from around the diesel particulate filter (DPF) outlet pipe and doser.

4

Remove all tie straps that attach the harness connector and the sensor lead.

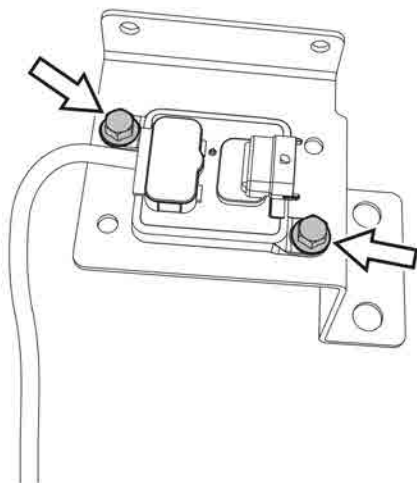




W2006483

5

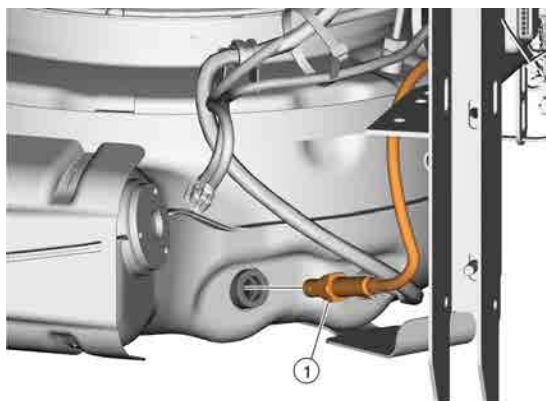
Disconnect the harness from the NOx control module.



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6

Remove the control module mounting fasteners.



W2055427

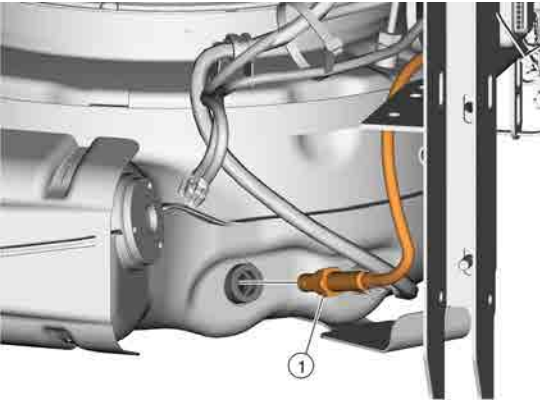
7

Remove the NOx sensor (1).

Installation

1

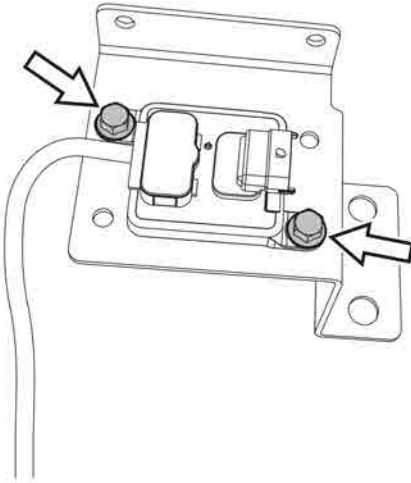
Install the NOx sensor (1).



W2055427

2

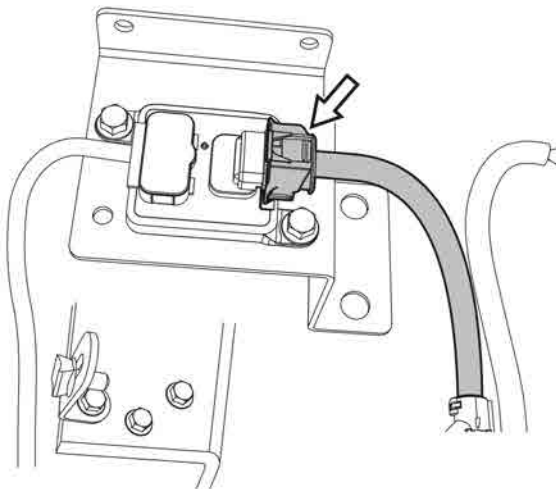
Install the control module mounting fasteners.



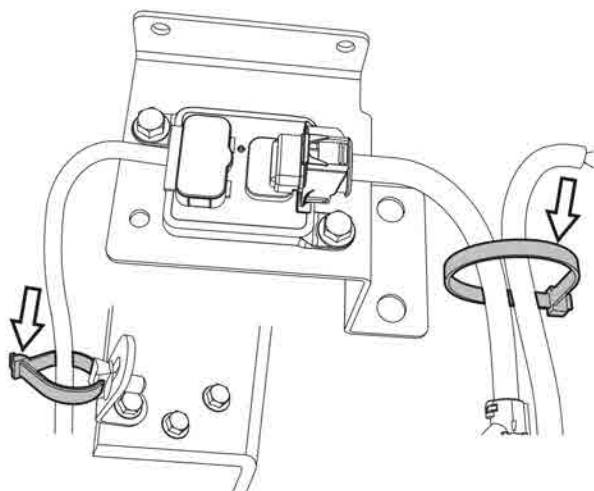
W2006484

3

Connect the harness to the control module.



W2006483



W2006482

4

Attach the harness and the sensor lead with tie straps.

5

Install insulation around the DPF outlet pipe and doser.

6

Set the engine disable switch to "ON".

7

Connect the Tech Tool, use guided diagnostics to read and clear any diagnostic trouble codes (DTCs) and check operation.

8

Close the rear engine service doors.