



Updated PM Sensor Removal Procedure - US17+OBD16 and Newer Emissions



> Internal Content

Once the PM Sensor is determined to be replaced, follow the steps below to remove the failed sensor.

1. Cut the harness at the top of the sensor.



2. Spray the sensor nut with a suitable rust penetrant and let soak for approximately 5 minutes.





3. Remove the sensor with a ½" drive impact and appropriately sized deep socket.



4. Use an M18 x 1.5mm **bottoming** tap to chase the SCR boss threads.

- Example bottoming tap – Grainger part # 2LWT5



5. Inspect the boss threads and PM Sensor alignment notch for debris and clean if necessary.



Live UI



6. Install the new PM sensor and torque to spec. Refer to [Impact](#) for the correct torque spec.

If it is not possible to install the new sensor due to stripped bung threads refer to Technical Service Bulletin 258-039, SCR Fittings.

1. Navigate to the Service tab.
2. In the Info Type box, make sure Technical Service Bulletins is selected.
3. In the Additional search values box select Keyword
4. Enter [258-039](#) into the text entry box, press the Search button.

 Live UI

..... for the article will be shown in the results. Click on the title, then

choose one of the options from the window that opens.

NOTE

An eService case is NOT REQUIRED for approval to replace a damaged SCR. Cases opened for approval to replace for this issue WILL BE REFUSED.



Tags

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Related links and attachments

[FSB 258-039](#)

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25074-9 FSB 258-039, SCR Fittings, One Box, Replacement

PM, NOx and Temperature Sensor Fittings

(October 2020)

Certain Volvo Trucks VN, VAH, VHD models equipped with aftertreatment system (One box SCR) may require replacement of SCR fittings such as NOx sensor, temperature sensor, PM (Particulate Matter) sensor.

Follow the instruction outlined in this FSB to replace the sensor boss or bosses in the one box SCR. The one box SCR must be removed from vehicle to replace the sensor boss or bosses. Based on your vehicle configuration, perform any one of the below given standard repair procedures to remove and install the one box SCR.

Standard Repair Procedure

Labor Code	
Muffler, replace. (Combined DOC-DPF-SCR)	2589-03-02-43
OR	
Muffler, replace. (Combined DOC-DPF-SCR) (decontented)	2586-03-02-10

Note: Replacement of aftertreatment muffler is not necessary if the sensor boss threads are damaged during service.

Volvo Trucks released all ATD sensor bosses.

Note: This repair requires TIG or MIG welding and should be performed by a certified technician. Stainless Steel welding wire/rod (ER308) recommended with appropriate shielding gas (Argon).

Required Parts

Part Description	New part number	Quantity
Boss temperature sensor	23144461	1
Boss NOx sensor	23501651	1
Boss PM sensor	23501654	1

Required Tools

Carbide Tip Hole Saw Size	Sensor Boss
1-3/16 (30 mm)	PM Sensor Boss
1-1/4 (32 mm)	NOx Sensor Boss M20

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1-1/16 (27 mm)

Temperature Sensor
Boss M14

Procedure



Warning

Risk of burn injuries.

Allow the engine to cool before start work on the Aftermarket system.



Caution

Service Information Advisory.

If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

You must read and understand the precautions and guidelines in Service Information, Function Group 2, "General Safety Practices, Engine" before performing this procedure.

Note: This repair procedure only applies to the sensor bosses located on the SCR outlet pipe.

Note: The 1-Box SCR should be removed from the vehicle when the following procedure is performed.

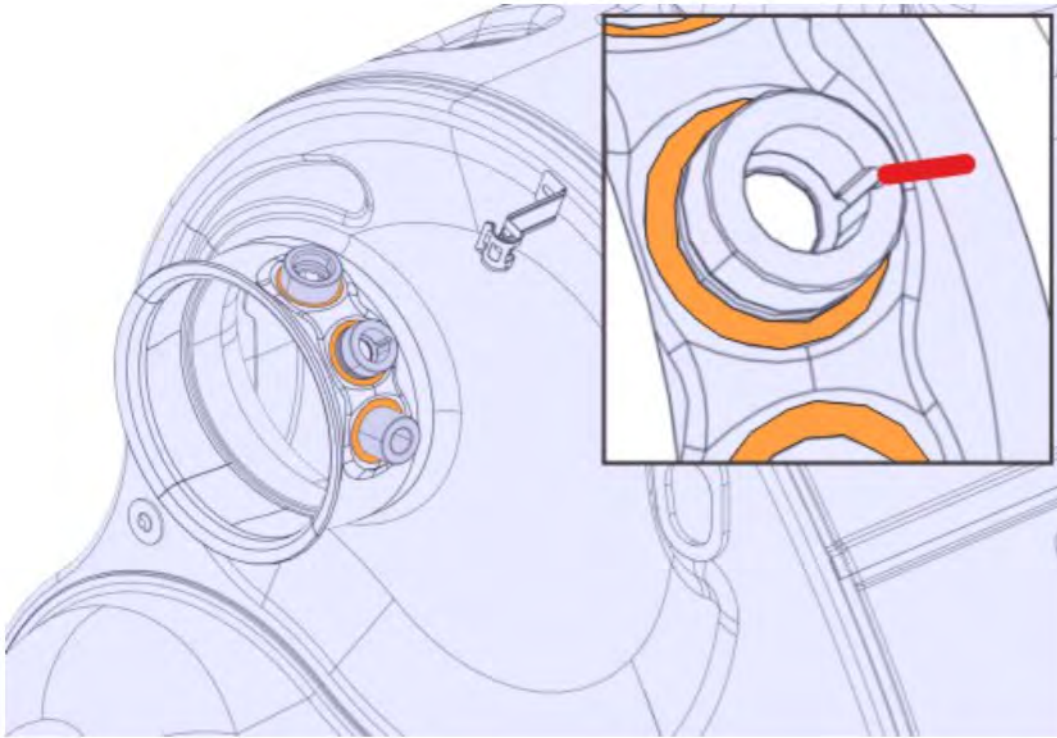
Note: The illustration shown in this procedure to remove or install the bosses is general, replace only the damaged boss/bosses. Do not replace the undamaged boss/bosses.

1. Remove the damaged boss welding.

Note: If the PM sensor boss is damaged as shown in the illustration mark the position of sensor boss notch before removing the boss welding. The notch of PM sensor boss is always set in the 3'o clock position.

Note: Use the sensor boss to pilot the hole saw.

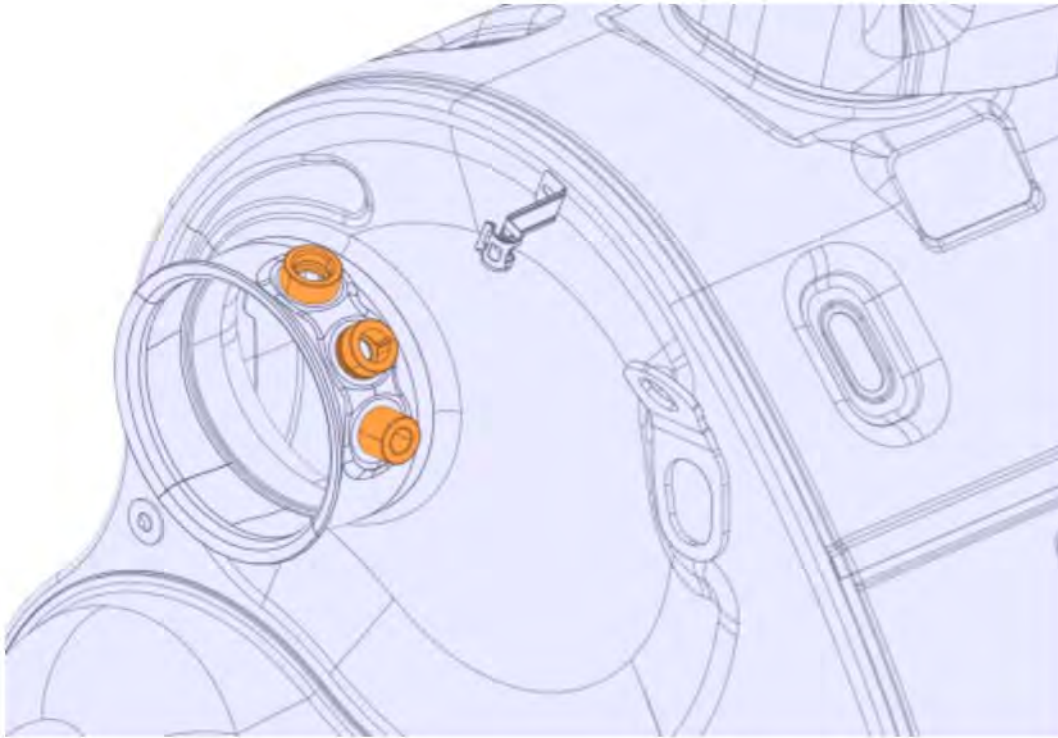
Note: When removing the sensor boss weld, check the depth frequently to prevent the damaged sensor boss from falling inside the aftertreatment muffler. Also ensure that the notch mark is not removed.



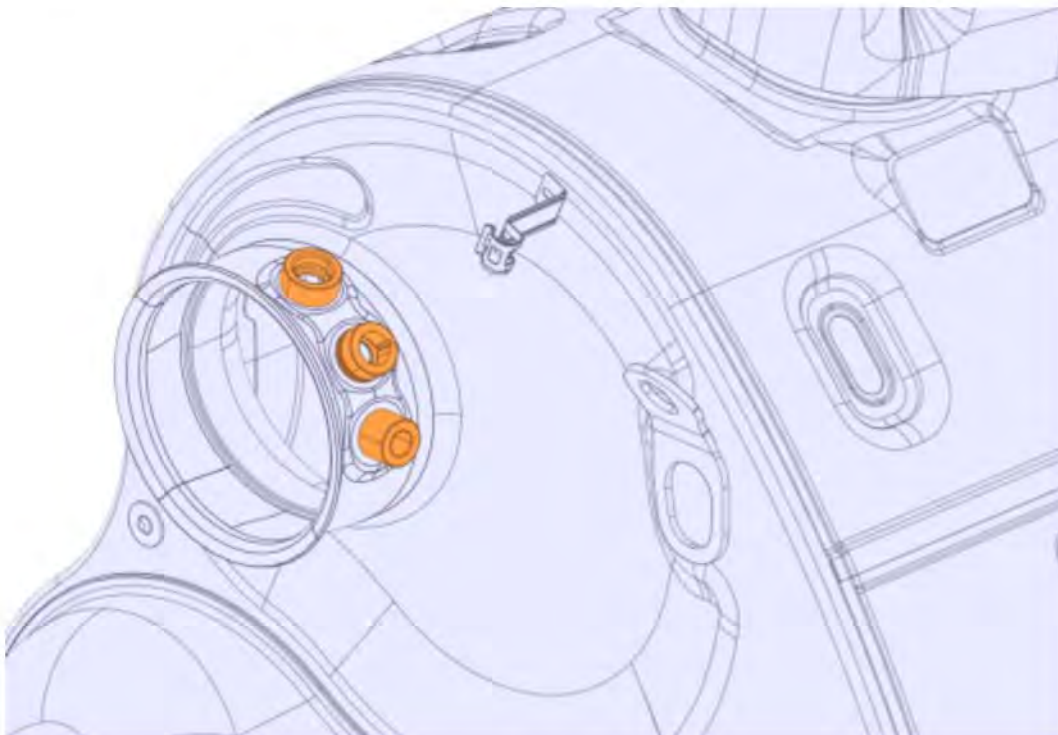
2. Remove the damaged boss/bosses (Temperature/NOx/PM sensors).

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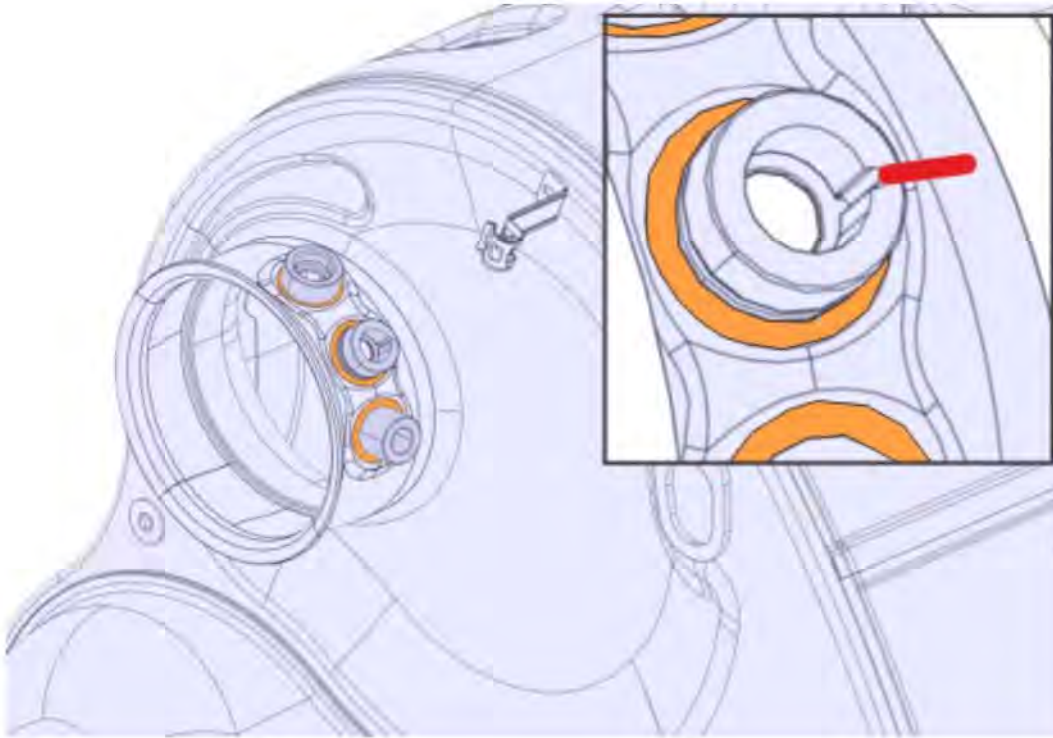
3. Clean off all metal shavings from around the sensor boss hole. Prevent metal chips from entering the Aftertreatment muffler.
4. Verify that the new sensor boss fits the sensor before welding in place.



5. Install the new sensor boss and perform the welding.

Note: When replacing the PM sensor boss, position the notch of new boss as marked. The notch of PM sensor boss is always set in the 3'o clock position.

6. Tack weld the sensor boss, complete the weld around the boss.



Reimbursement

<p>This repair may be eligible for reimbursement if a product failure was experienced within time and mileage limits of the applicable warranty coverage. Reimbursement is obtained via the normal claim handling process.</p>	<p>UCHP Reimbursement</p>
<p>Claim type (used only when uploading from the dealer Bus. Sys.)</p>	<p>01</p>
<p>Labor Code</p>	
<p>SCR Fittings, one box, replace (one boss)</p>	<p>2589-03-09-04 (0.3 hrs)</p>

Volvo Trucks reserves the right to make any changes in design or to make additions to or upon its products without incurring any obligations to install the same on vehicles previously built.