ACCOUNT TEAM COVERAGE

Please Deliver To: Service Managers and Warranty Decision Makers

FROM: Cummins Global Warranty Administration Communications

Subject: X15 CM2350 X114B and X116B Aftertreatment NOx sensor ATC for Volvo

Number: Atc2061 **Date:** 04-Dec-2018

Expires: 01-Aug-2019 (U.S./Canada)
01-Aug-2019 (International)

Attention: michae[redacted]@cummins.com

This is to revise and replace ATC 2061, dated 23-Oct-18. This revision is to:

1 Update the narrative.

If additional information is required, please contact your Cummins Warranty Operations Group Leader.

DESCRIPTION:

This Campaign is being issued to address certain X15 CM2350 X114B and X116B units that have found fault code 3545 and 1887 active. This Campaign authorizes certified repair locations to use the attached procedures to implement a drain hole in the NOx cup.

ACTION:

In order to qualify for repair under this field action, an engine:

1 will be covered Regardless of coverage status, and

2 **must** show as OPEN on QuickServe® Online for this field action.

NOTE: The ESN list is attached for reference.

After verifying that the engine meets the above requirements, perform the following actions:

1 Remove the Outlet NOx Sensor. Take care to remove carefully. The sensor will need to be reinstalled after the repair. Please refer to Aftertreatment Outlet NOx Sensor replacement Procedure 019-451 in Section 19, in the appropriate service manual.

2 Remove the Particulate Sensor. Take care to remove carefully. The sensor will need to be reinstalled after the repair. Please refer to Aftertreatment Particulate Sensor Procedure 019-478 for the removal of the PM sensor in the appropriate service manual.

3 Please refer to Attachment B, Aftertreatment Outlet NOx Sensor Cup Cleaning Procedure. Complete all the steps detailed in Attachment B.

4 Please refer to Attachment C, Aftertreatment Outlet NOx Sensor Cup Drain Hole Installation Procedure. Complete all the steps detailed in Attachment C.

5 Reinstall the Outlet NOx Sensor and the Particulate Sensor as indicated in the appropriate service procedures.

NOTE: If the sensors are damaged during the removal, replacements can be claimed with supporting narrative.

MATERIAL DISPOSITION:

There are no materials involved in the field action.

REIMBURSEMENTS:

Parts:

NOTE: Please contact ou[redacted]@cummins.com for any new order of Drill Bushing Kit and provide the mandatory information below. Subject: Required Drill Bushing Kit. Requested Quantity: Address of Delivery: Contact Name: Phone Number:

Parts are **not** covered under this field action:

Part Number	Quantity	Description
5395574	1	KIT,DRILL BUSHING (INFO ONLY)

NOTE: SRTs to gain access that are required to complete the repair, that are sufficiently explained in the claim narrative, may also be claimed on this action.

Labor using applicable Access Code and Time:

SRT Code	Description	Time
00-90X	Administrative time	
19-0D4	Aftertreatment Particulate Sensor - Remove and Install - X15 CM2350 X114B (OPTIONAL)	
19-0D5	Aftertreatment Outlet NOx Sensor - Remove and Install - X15 CM2350 X114B (OPTIONAL)	
19-0G6	Aftertreatment Particulate Sensor - Remove and Install - X15 CM2350 X116B (OPTIONAL)	
19-0G7	Aftertreatment Outlet NOx Sensor - Remove and Install - X15 CM2350 X116B (OPTIONAL)	
99-902	BUSHING DRILLING AND CLEAN UP (QTY 5)	

Travel:

Travel is **not** covered under this field action. Towing is **not** covered under this field action.

Other Claimables:

Consumables are **not** covered under this field action.

Claim Instructions:

For Cummins Dealers, claims for this Field Campaign **must** be filed via **RAPID**SERVE™ Web (rsw.cummins.com). For information regarding **RAPID**SERVE™ Web, please reference the "Warranty" tab in QuickServe® Online. If there are additional questions, please contact your local Cummins Distributor.

Account Code: 27
Pay Code: ..... Distributor = X
Pay Code: ..... Dealer = D
Pay Code: ..... International = I
Failure Code: ..... WYNEBB

Attachments
atc2061_esn-list.xlsatc2061_nox_cup_cleaning_instruction_attachment-b.pdfatc2061_nox_cup_drain_hole_installation_instruction_attachment-c.pdf

Service Instruction

Aftertreatment Outlet NOx Sensor Cup Clean Procedure.

Product

- X15 CM2350 X114B
- X15 CM2350 X116B

The purpose of this document is to guide the user through the steps involved in cleaning around the NOx shield and cup in the SCR (Selective Catalyst Reduction).

Parts Required

The material required to clean the NOx cup are provided in Table 1. This is the only item approved for this procedure.

Table (1.) Required Parts	
Part Description	Part Number
Distilled Water	

Personal Protection Equipment (PPE)

- Completing a Job Safety Assessment (JSA) prior to performing work helps identify job safety hazards and prevent incidents.
- To reduce the possibility of personal injury, personal protective equipment (PPE) must be utilized. Reference General Safety Instructions Procedure 204-006 in Section I of the corresponding Service Manual.

Installation Tools

No special service tools are required to clean the NOx cup. The table below is the list of standard service tools required along with any additional items recommended.

Table (1), Required Items	
Service Tools	Additional
Clean Towels	Distilled water
Safety Glasses	

WARNING

Wait for the Aftertreatment system to cool down before working on the hot exhaust or exhaust components. Failure to do so could result in personal injury.

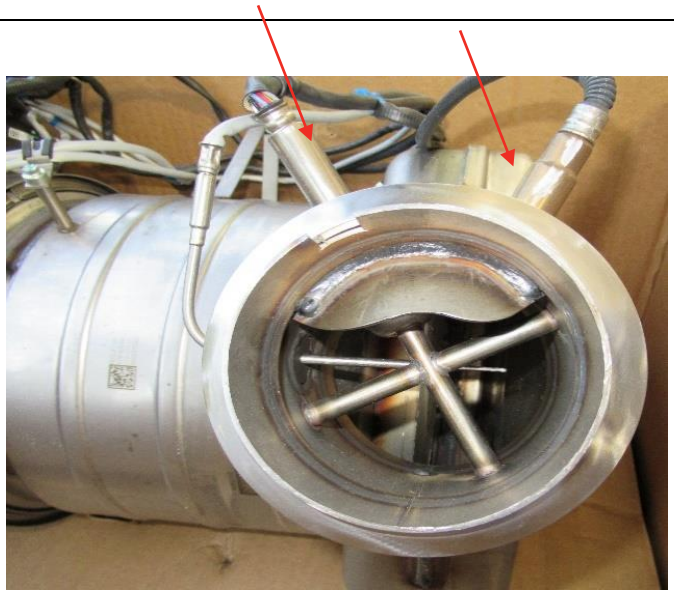
Preparation Steps:

1. Remove exhaust stack to expose the SCR outlet according to the OEM service procedures.

2. Remove outlet sensors shown in **Figure 1** and place them in **a safe place** prior to cleaning the NOx cup.

3. Refer to **Aftertreatment Outlet NOx sensor replacement procedure in section Procedure 019-451** in section 19, in the corresponding service manual.

4. Refer to **Aftertreatment Particulate Sensor Procedure 019-478** for the removal of the PM sensor in the corresponding service manual.



SCR Overview

Figure 1

Clean Nox Cup

5. Use prefer delivery method, dispense distilled water into the NOx cup. Figure 2

ATTENTION: If a funnel is used, it **MUST** be clean and clear of any contaminates. Failure to recognize this can result in the introduction of new contaminates that can and will cause the NOx sensor to fail.

6. Wait 30 seconds to allow contaminates to dissolve.

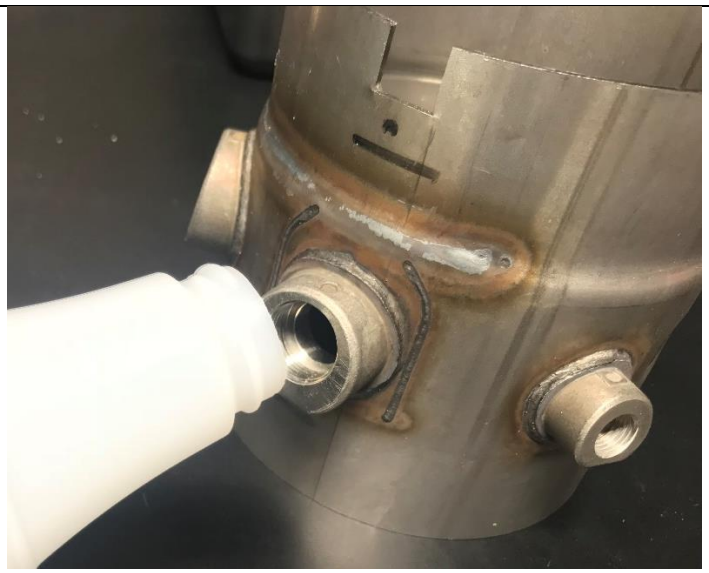
7. Using shop air, insert the air chuck into sensor boss to blowout the residuals until dry. (Recommended shop air pressure: 90 to 150 psi.)

Caution: When using shop air, ensure PPE is used to protect your eyes and skin in case any debris comes loose during this process.

8. Use a clean cloth to remove any debris found outside the NOx cup and SCR outlet pipe.

9. Repeat steps 5 – 8 three (3) times to ensure all contaminates are removed.

Caution: Do not use any chemical solvents or cleaners to clean internal metal surface. Possible damage to Aftertreatment SCR catalyst may occur.



Distilled Water Delivery
Figure 2

Shop Air
Figure 3

Finishing Steps

10. Install the original Aftertreatment outlet NOx sensor and the PM sensor.

11. For the **NOx sensor**, see Aftertreatment Outlet NOx Sensor **Procedure 019-451** in Section 19, in the corresponding service manual

12. For the **PM sensor**, see Aftertreatment Particulate Sensor **Procedure 019-478** in the corresponding Service Manual.

Service Instruction

Aftertreatment Outlet NOx Sensor Cup Drain Hole Installation Procedure.

Product Affected

- X15 CM2350 X114B
- X15 CM2350 X116B

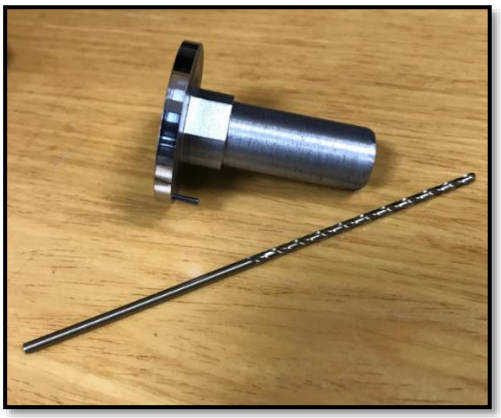
The purpose of this document is to guide the user through the steps involved in adding a drain hole inside the NOx cup in the SCR (Selective Catalyst Reduction).

Parts Required

The material required to drill the NOx cup are provided in Table 1. This is the only item approved for this procedure.

Table (1.) Required Parts	
Part Description	Part Number
Special Tool Kit(Bushing, Drill bit)	
Portable Drill	

Special Tool Kit



Personal Protection Equipment (PPE)

- Completing a Job Safety Assessment (JSA) prior to performing work helps identify job safety hazards and prevent incidents.
- To reduce the possibility of personal injury, personal protective equipment (PPE) must be utilized. Reference General Safety Instructions Procedure 204-006 in Section I of the corresponding Service Manual.

Installation Tools

Special service tools are required to drill the hole in the NOx cup. The table below is the list of standard service tools required along with any additional items recommended.

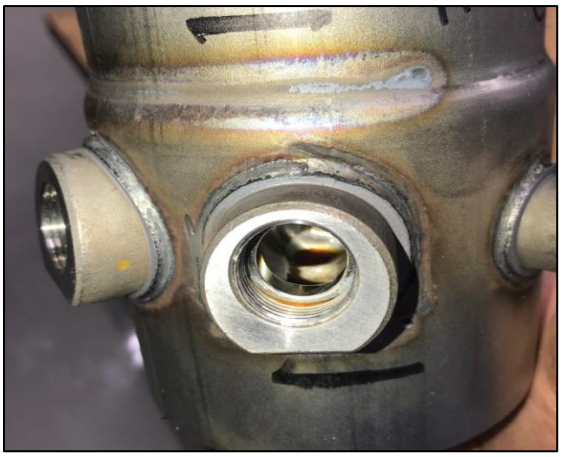
Table (1), Safety Items	
Shop Gloves	
Clean Towels	
Safety Glasses	

Preparatory Steps

WARNING

Wait for the Aftertreatment system to cool down before working on the hot exhaust or exhaust components. Failure to do so could result in personal injury.

1. Remove the NOx sensor and place it in **a safe place** prior to drilling the hole and cleaning the NOx cup.
2. Refer to **Aftertreatment Outlet NOx sensor replacement procedure in section Procedure 019-451** in section 19, in the corresponding service manual.
3. Refer to **Aftertreatment Particulate Sensor Procedure 019-478** for the removal of the PM sensor in the corresponding service manual.
4. Refer the attached **Aftertreatment Outlet NOx Sensor Cup Clean Procedure.**



NOx Cup
Figure 1

5. Insert bushing into the NOx Cup as seen in **Figure 2**, ensure the guide pins are located on the bottom.

6. Setup portable drill with the supplied drill bit.

7. Secure the bushing and insert the drill bit into the guide hole.

Caution: Ensure your hands are free and clear from the rotating parts and use precision to avoid breaking of drill bit.

8. Refer the attached **Aftertreatment Outlet NOx Sensor Cup Clean Procedure** to remove any extra debris from that accumulated during the drilling process.

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Bushing inserted into NOx Cup
Figure 2

Finishing Steps

1. Install the original Aftertreatment outlet NOx sensor.

2. For the **NOx sensor**, see Aftertreatment Outlet NOx Sensor **Procedure 019-451** in Section 19, in the corresponding service manual