

ACCOUNT TEAM COVERAGE

Please Deliver To: Service Managers and Warranty Decision Makers

FROM: Cummins Global Warranty Administration Communications

Subject: X15 CM2350 X114B/X116B Air Compressor Inlet Plumbing Sealing Improvement ATC

Number: Atc2405

Date: 11-Feb-2021

Expires: 19-Feb-2022 (U.S./Canada)
19-Feb-2022 (International)

Attention:

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

DESCRIPTION:

This ATC is being issued to address sealing robustness on air compressor inlet plumbing on certain X15 engines. The following are the 3 components being addressed:

- 1 Turbocharger inlet to turbocharger adapter interface, and
- 2 Air compressor inlet plumbing O-rings, and
- 3 Hose clamp at resonator box (**ONLY** for engines equipped with CI1034 option).

In addition, the Engine Control Module (ECM) will be recalibrated. This calibration contains improvements that may reduce false occurrences of Fault Code 555 & 556. This field action provides authorization for certified repair locations to seal the turbocharger inlet to turbocharger adapter with RTV, replace the air compressor inlet plumbing O-rings, replace the hose clamp at the resonator box, if equipped, and recalibrate the ECM.

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 Please refer to Attachment B. Detailed instructions on documenting, inspecting, and completing the repairs are documented in Attachment B.

MATERIAL DISPOSITION:

Materials removed as a result of this field action **must** be scrapped.

NOTE: Cummins P/N 3824878 cannot be claimed under the Parts section of the claim. Please refer to Other Claimables section of this publication for further instructions.

REIMBURSEMENTS:

Parts:

The following parts are covered under this field action:

Part Number	Quantity	Description
316406700	1	RTV GASKET SEALANT
382487800	1	LUB, RUB (FOR INFO ONLY)
393154500	1	HOSE CLAMP (CI1034 OPT ONLY)
565809800	4	O-RING FOR A/C INLET TUBES

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.

NOTE: All SRTs listed are OPTIONAL. Select **ONLY** the appropriate SRTs for the repair performed.

Labor using applicable Access Code and Time:

SRT Code	Description	Time
00-139	Part Photograph/ECM Images/Datalogs to Factory Service Group	
00-90X	Administrative time	
10-08M	Air Inlet Connection - Remove and Install - X15 CM2350 X114B	
10-09W	Air Inlet Connection - Remove and Install - X15 CM2350 X116B	
10-0KD	Air Cleaner Element - Inspect for Reuse (CMI)	
12-019	Air Compressor Inlet Tube - Remove and Install - X15 CM2350 X114B	
12-01T	Air Compressor Inlet Tube - Remove and Install - X15 CM2350 X116B	
17-902	Campaign/ATC Check	
19-0G5	Engine Control Module Calibration Code - Transfer (CMI)	
99-008	SEAL TURBO INLET TO TURBO ADAPTER (QTY 1)	

Travel:

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

NOTE: Please schedule the Technicians time to maximize the number of units that can be repaired on a single visit. When filing claims for multiple ESNs, where travel is required and authorized, travel can be filed to **ONLY** one (1) ESN.

Other Claimables:

Consumables are covered under this field action.

NOTE: Please consolidate all consumables and claim them as one line item in Other Claimables titled CAMPAIGN SUPPLIES. A maximum of \$10.00 (USD) may be claimed for consumables, such as P80™ Rubber Emulsion Lubricant (Or Equivalent), that are sufficiently explained in the claim narrative.

Claim Instructions:

For Cummins Dealers, claims for this Field Campaign **must** be filed via **RAPIDSERVE™** Web (rsw.cummins.com). For information regarding **RAPIDSERVE™** 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: North America Distributor = X
Pay Code: North America Dealer = D
Pay Code: International Distributor = I
Pay Code: International Dealer = R
Failure Code: WQIORA

Attachments

atc2405_esn-list.xlsxatc2405_x15_air_compressor_inlet_plumbing_installation_procedure_attachment-b.pdf



**X15 CM2350 X114B/
X116B Air Compressor
Inlet Plumbing Sealing
Improvement ATC**

Revision: 2/9/2021

X15 Air Compressor Inlet Plumbing Sealing Improvement ATC

1. Overview
2. Documentation
3. Inspection
4. Installation Procedure

1. Overview

This field action provides authorization for certified repair locations to seal the turbocharger inlet to turbocharger adapter with RTV, replace the air compressor inlet plumbing O-rings, replace the hose clamp at the resonator box, if equipped with CI1034 option, and recalibrate the ECM.

The following pages will detail how to sufficiently document, inspect, and complete the product improvements.

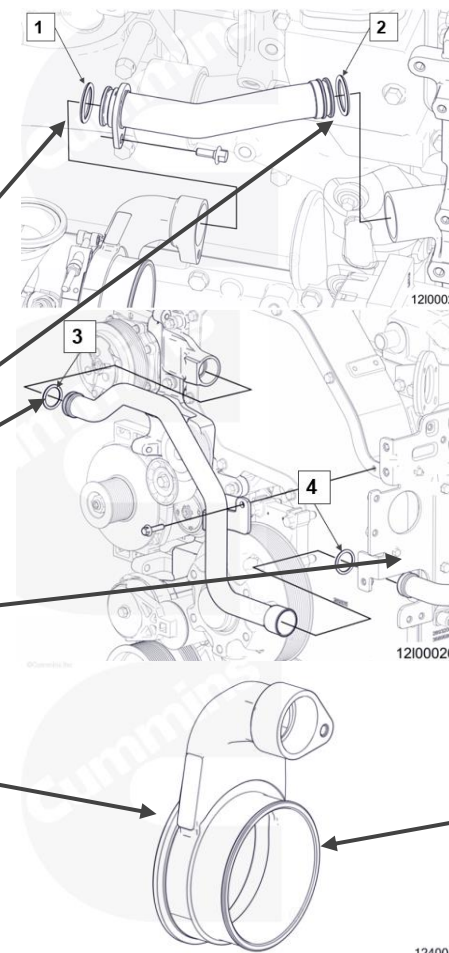
2. Documentation

Using EDS or Guidanz, add a new DS with the Engine Serial Number, mileage, etc., and enter “Field Action for Air Compressor Plumbing” into the fault code search field in EDS or Guidanz and complete the following steps and upload to the data session.

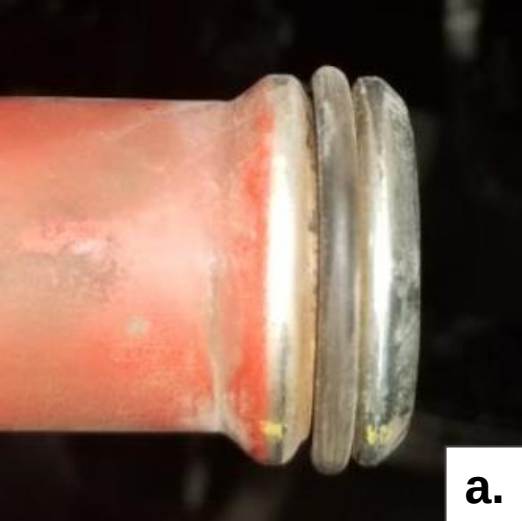
Capture the following and upload to DS created:

1. ECM Image
2. Photos (11 Total) [Use page 5 for reference photos]
 - a) Air compressor inlet tube O-rings (O-rings 1-4)
 - b) Turbocharger compressor inlet
 - c) Turbocharger compressor inlet with turbocharger adapter installed
 - d) OEM air filter element (clean side)
 - e) OEM air filter element (dirty side)
 - f) OEM air filter element part number
 - g) OEM intake air plumbing (downstream of air filter)
 - h) OEM air cleaner housing part number

Note: For engines equipped with CI1034 option, it is not required to document the connection at the resonator box.



Turbocharger Adapter



a.



b.



c.

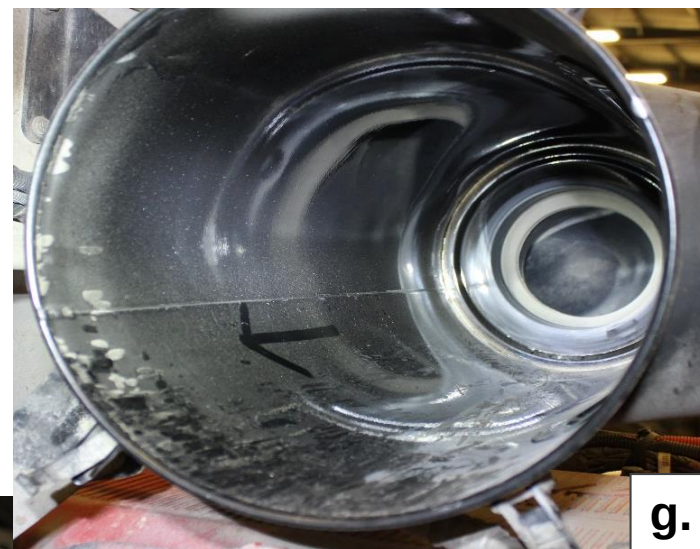


d.



e.

Photos are for reference only. Actual plumbing arrangements and air filter configurations may vary.



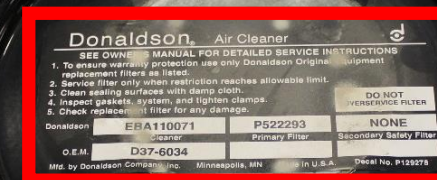
g.



f.



h.



3. Inspection

Inspect the following components:

Components to Inspect

- OEM Air Filter

Outcome from Inspection

- Is air filter within maintenance specification? If required, consult customer on air filter replacement.

4. Installation Procedure

- A. Safety
- B. Materials Needed
- C. Seal the Turbocharger Inlet to the Turbocharger Adapter
- D. Air Compressor Inlet Plumbing O-Ring Installation
- E. Replace Hose Clamp at Resonator Box (ONLY for Engines Equipped with CI1034 Option)
- F. Recalibrate the ECM
- G. Completion Steps

A. Safety

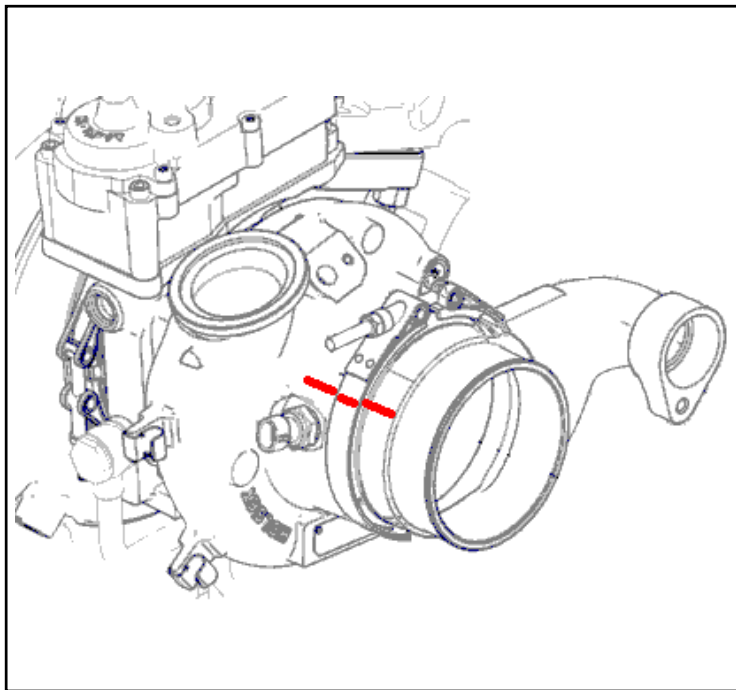
- Review QuickServe® Online document 204-006 General Safety Instructions.

B. Materials Needed

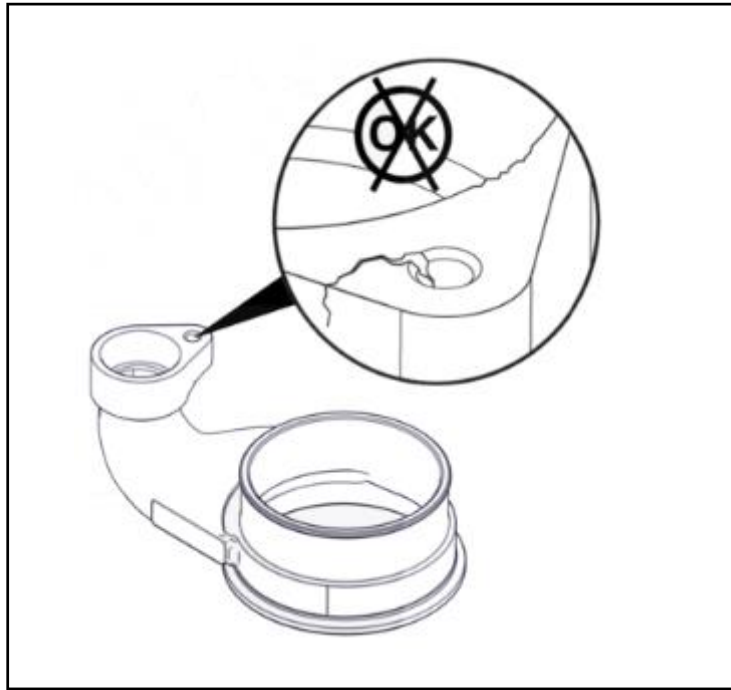
Required Materials:

Part Number	Nomenclature	Quantity
3164067	Grey RTV Gasket Sealant (Loctite 5699)	1
5658098	O-Ring for Air Compressor Inlet Tubes	4
3824878*	P80™ Rubber Lubricant Emulsion (Or Equivalent) Can be purchased through Cummins (*CMI PN referenced) or can be sourced commercially	-
3931545	Constant Tension Spring Clamp (If CI1034 Equipped)	1

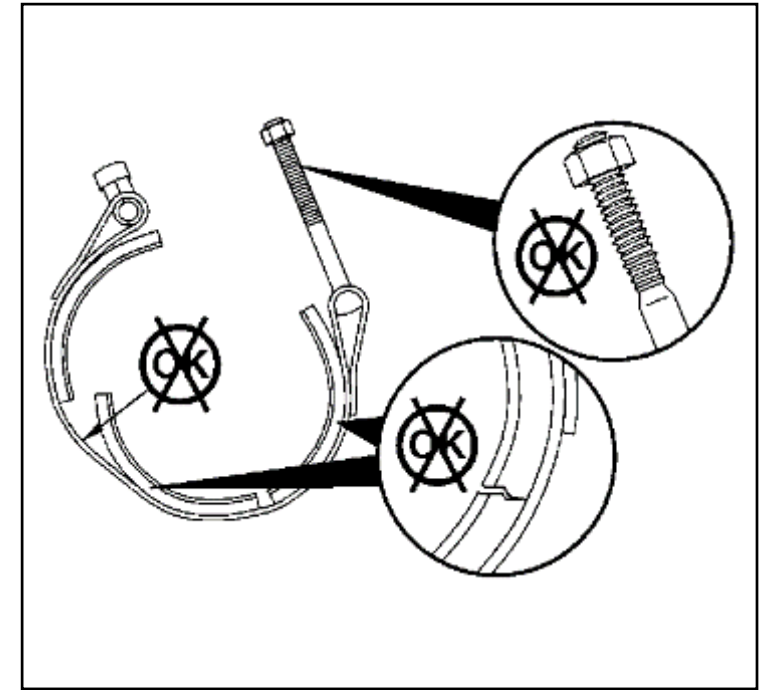
C. Seal the Turbocharger Inlet to the Turbocharger Adapter



1. Use a **paint pen** to mark a **single line** across the Turbocharger Compressor Housing, V Band Clamp and Air Compressor Adapter. This is to mark the relative location of all three's orientation.

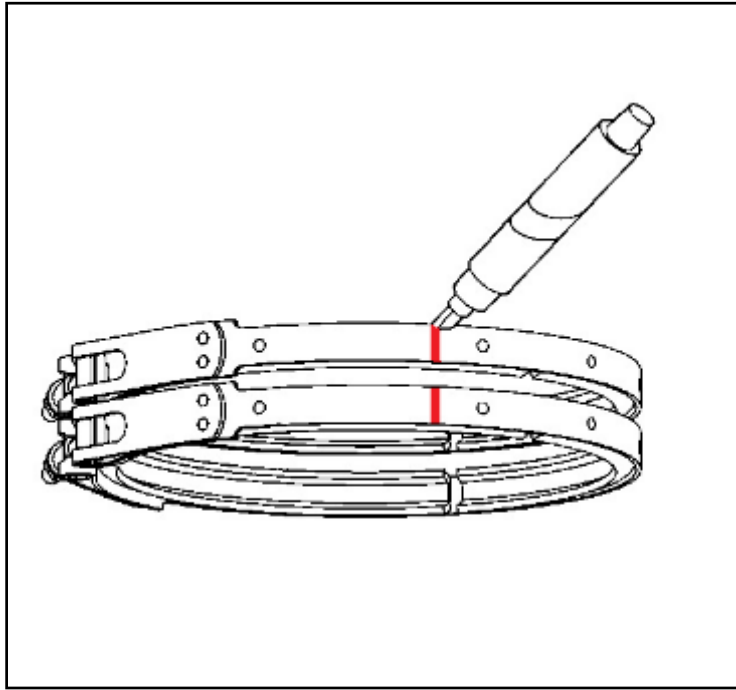


2. Loosen the V-Band Clamp to **Remove and Inspect** the Air Compressor Adapter & Turbocharger Compressor Housing for damage.

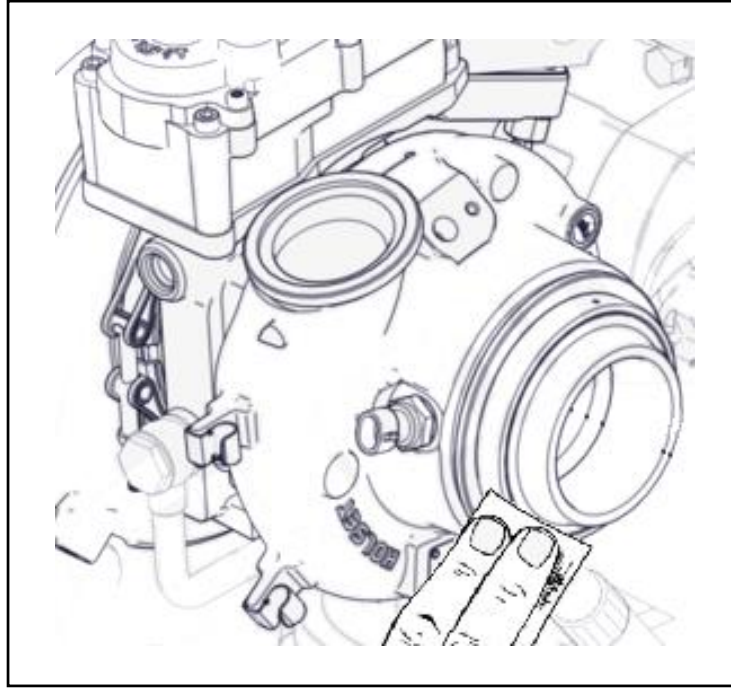


3. **Remove and Inspect** the V-Band Clamp. There should be no signs of extension, must not be bent or broken, no thread damage. Replace if needed.

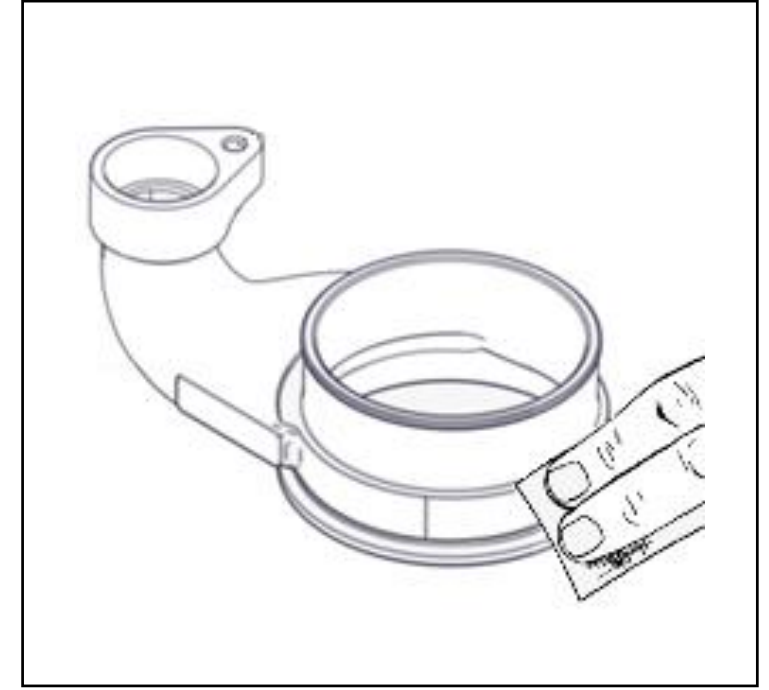
C. Seal the Turbocharger Inlet to the Turbocharger Adapter (Cont.)



4. **Transfer the markings** from the original V-Band Clamp to the new V-Band Clamp, **if necessary**.

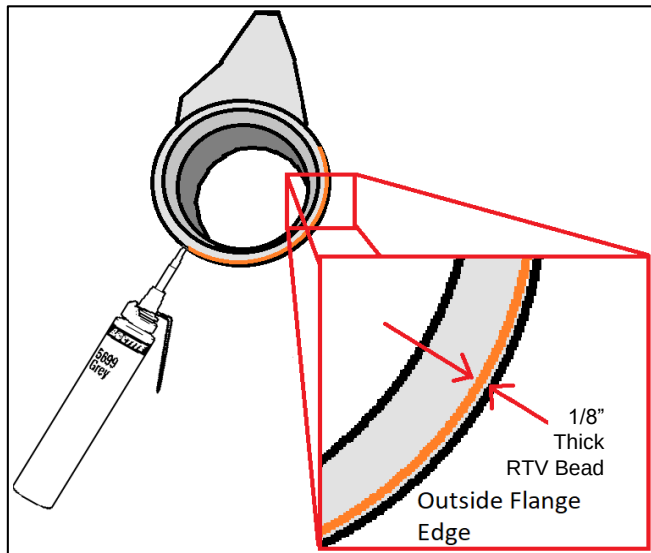


5. **Clean** the face of the Turbocharger Compressor Housing.



6. **Clean** the face of the Air Compressor Adapter.

C. Seal the Turbocharger Inlet to the Turbocharger Adapter (Cont.)

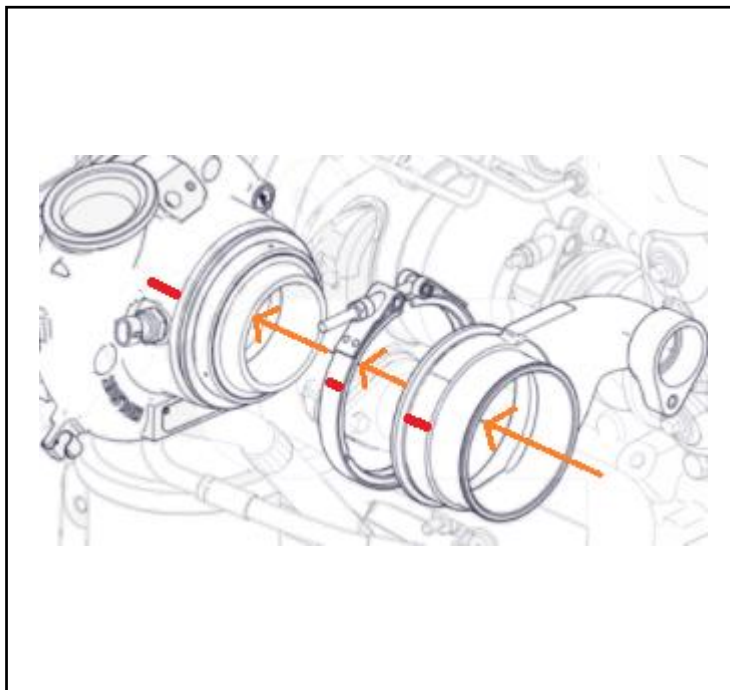


7. **Apply RTV** on the flat surface of the outside edge of the Compressor Adapter's rear face. Care should be taken for the following:

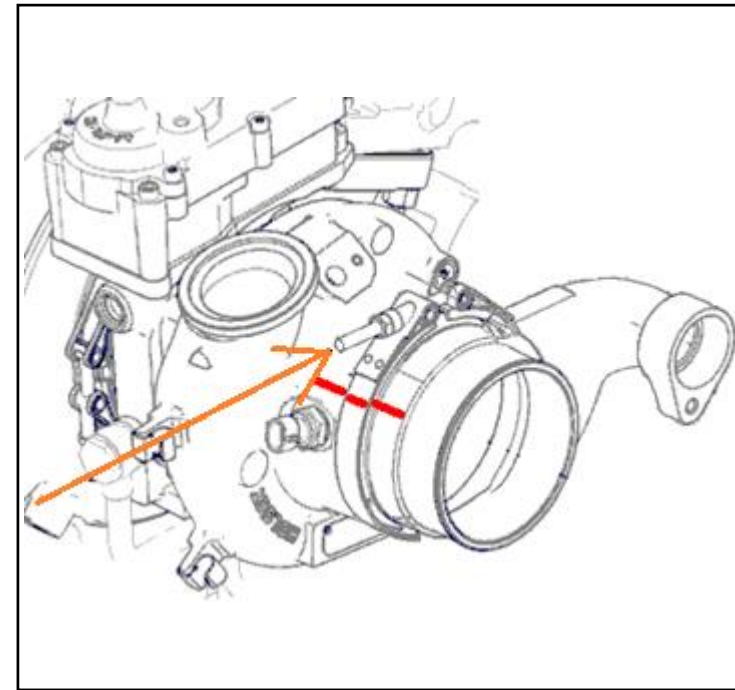
1. Bead must be no more than 1/8" wide along the outer diameter of the flange.
2. Assure the bead is both even thickness and even height.
3. Assure application of RTV is limited to the outside edge of the illustrated flange.



C. Seal the Turbocharger Inlet to the Turbocharger Adapter (Cont.)

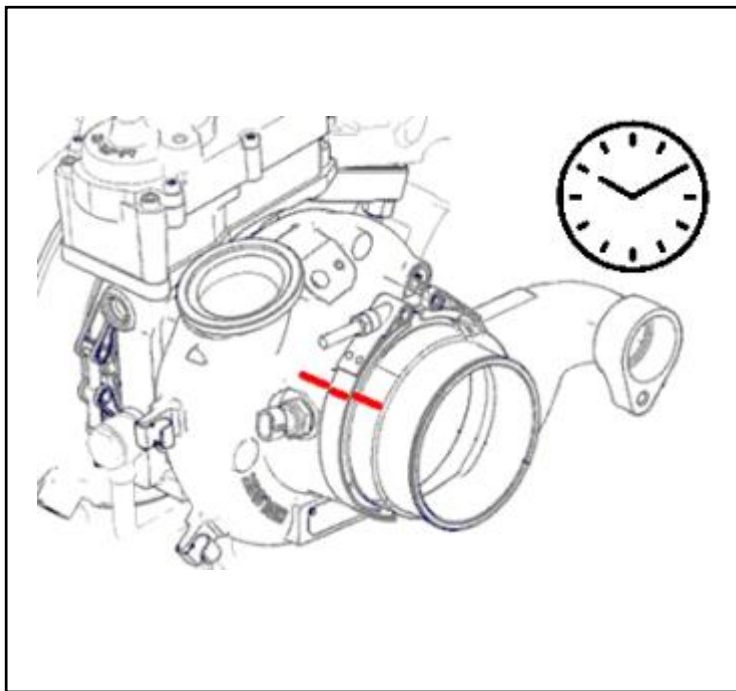


8. **Quickly install** the Air Compressor Adapter & V-Band Clamp to the face of the Turbocharger Compressor assuring proper alignment of the Clocking Marks on all three components.



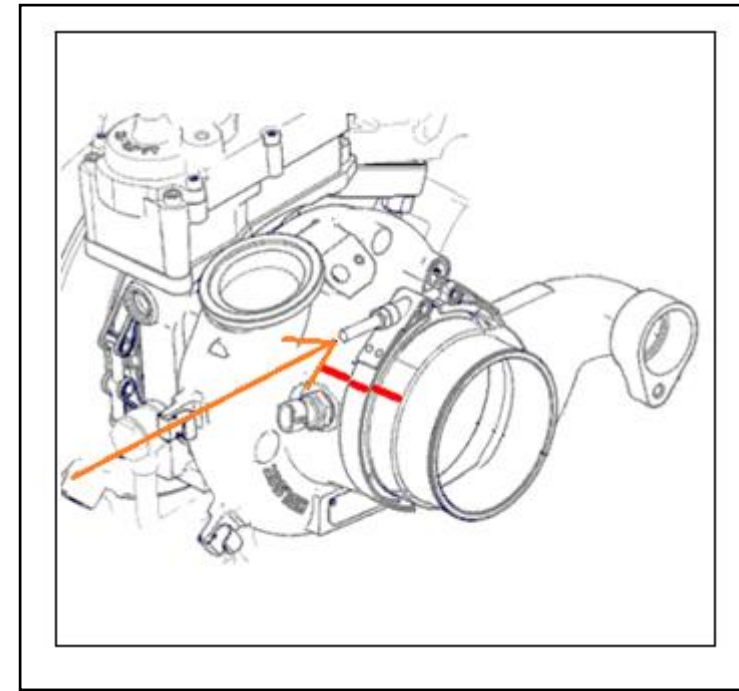
9. **Torque the V-Band Clamp** securing the components back together taking care to keep the Clocking Marks of all three components aligned. Tighten to spec. (111 in-Lb, Procedure 012-109 in applicable service manual)

C. Seal the Turbocharger Inlet to the Turbocharger Adapter (Cont.)



10. Allow the **RTV** to cure for **4 Hours** before starting the engine to minimize risk of drawing RTV into the Turbocharger.

NOTE: If vehicle needs to be relocated, engine can be started if operation time is limited to less than 5 minutes and vehicle speed does not exceed 15MPH.

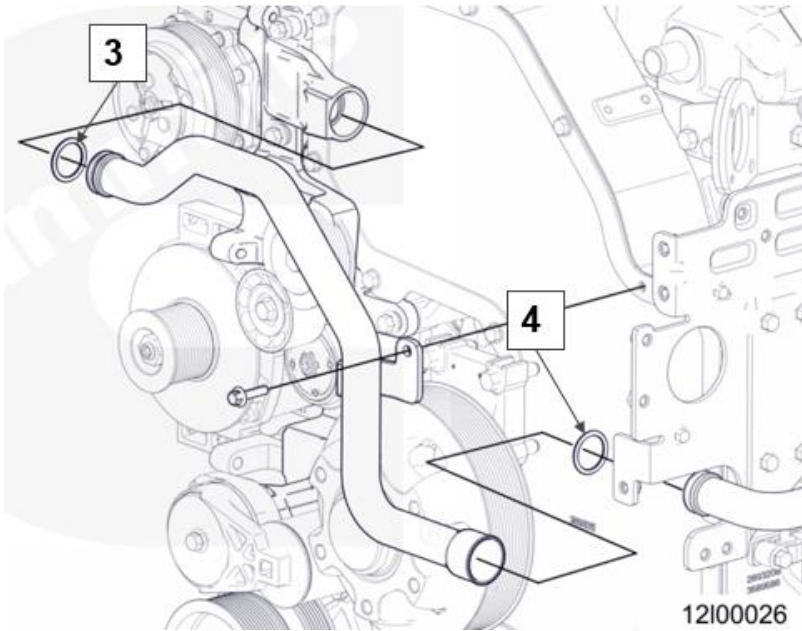
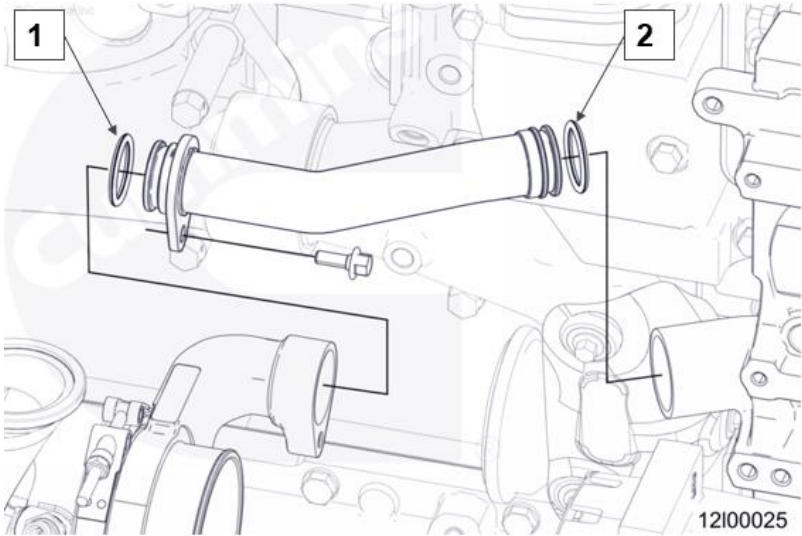


11. After allowing the RTV to cure for at least 4 hours, **Verify the Torque on the V-Band Clamp** at the specification from step 9. (111 in-Lb, Procedure 012-109 in applicable service manual)

D. Air Compressor Inlet Plumbing O-Ring Installation

- Follow procedure 012-109 [Air Compressor Inlet Tube] in the applicable service manual and install 4 new O-Rings. Location of 4 O-rings shown in images to the right.
 - Before tube installation, apply P80™ Rubber Emulsion Lubricant (or equivalent) to the O-rings.

Part Number	Nomenclature	Quantity
5658098	O-Ring for Air Compressor Inlet Tubes	4
3824878*	P-80™ Rubber Lubricant Emulsion (Or Equivalent) Can be purchased through Cummins (*CMI PN referenced) or can be sourced commercially	One bottle is sufficient for multiple applications

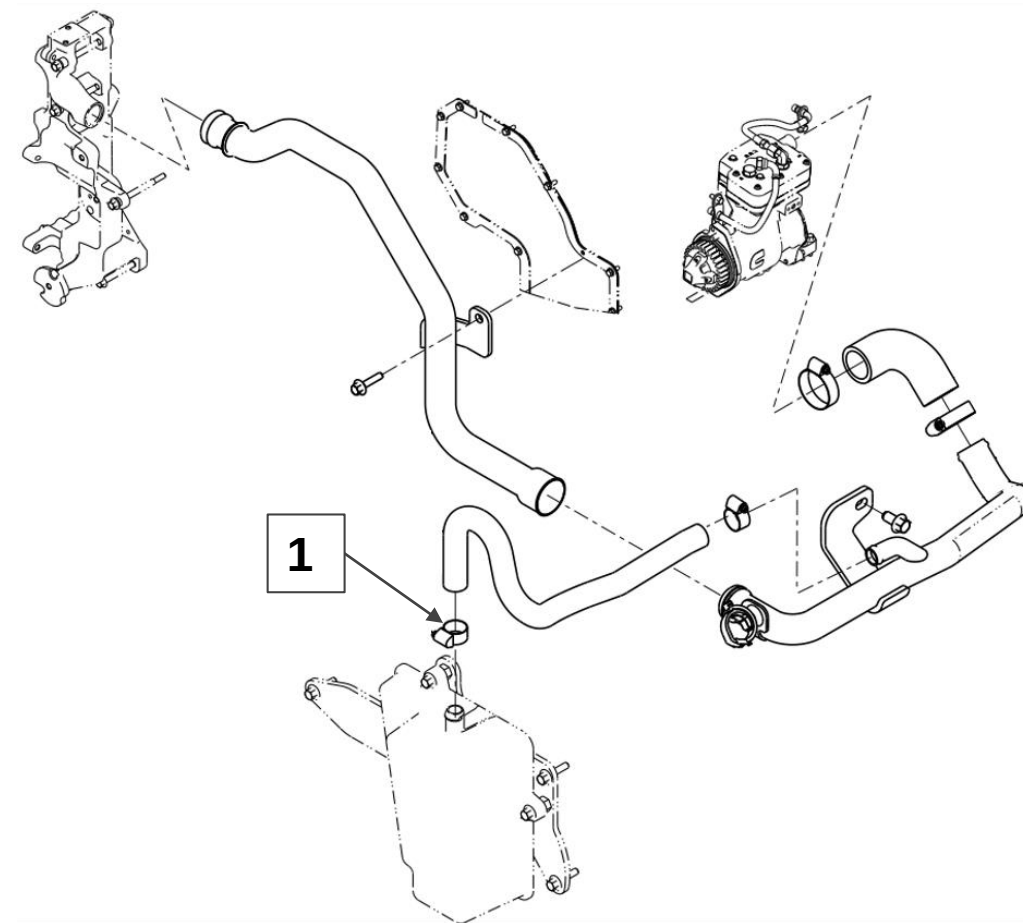


E. Replace Hose Clamp at Resonator Box

NOTE: This step is only for engines equipped with CI1034 option.

Replace the hose clamp at the resonator box with new constant tension spring clamp. Location of clamp indicated with #1 in image to the right.

Part Number	Nomenclature	Quantity
3931545	Constant Tension Spring Clamp	1



F. Recalibrate the ECM

1. Use the ECM Calibration Revision History available on QuickServe® Online to confirm the revision date of the calibration currently installed in the engine. If ECM already contains the most recent calibration revision, DO NOT recalibrate the engine, no further action for step F is required. Add 17-902 Campaign Check to claim instead of the ECM Calibration Code – Transfer SRT.
2. If a previous calibration revision is installed, download the latest calibration available on QuickServe® Online. Use the calibration revision history date to identify the latest calibration revision available. Please refer to Procedure 019-032 in the appropriate Service Manual.

G. Completion Steps

- Reinstall all components per applicable service manual.
- Once RTV has cured for at least 4 hours, retorque the V-band clamp and return the unit to service.



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