



Warranty Field Campaign

Campaign Number: c2046	Revision:	Released Date: 14-Aug-2018
X15 CM2350 X114B/X116B Turbo Actuator Water Intrusion Correction Campaign		Expiration Date (U.S. and Canada): 01-Aug-2020
		Expiration Date (International): 01-Aug-2020

X15 CM2350 X114B/X116B Turbo Actuator Water Intrusion Correction Campaign

Attention

- U.S / Canadian Distr./Branches and Div. Offices (Automotive)

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

Description

This Campaign is being issued to address turbo actuator corrosion / water intrusion resulting in an active fault code 1894 in certain chassis. This campaign authorizes certified locations to apply Loctite 290 and Permatex Silicone around the turbo actuator electrical connector and add insulation wrap to the OEM air conditioning line to prevent corrosion and water intrusion in the turbo actuator.

Note : This field action provides retroactive coverage for repairs made in anticipation of and prior to the release of this publication. Retroactive coverage will be supported for repairs made on or after 15 June 2018.

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 an OPEN status 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. Instructions on cleaning actuator, applying the Loctite 290 and Permatex silicone sealant are detailed.
2. Again, referring to Attachment B, follow the detailed instructions to install insulating foam tape and reflective heat shield tape on the OEM air conditioning line.

Material Disposition

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

Reimbursements

Parts

There are no parts covered in this field action.

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 : Some SRTs are listed as OPTIONAL. Select **ONLY** the appropriate SRTs for the repair performed.

Labor Using Applicable Access Code and Time

SRT Code	Description	Time (hrs)
00-90X	Administrative time	
17-902	CAMPAIGN CHECK (ACTUATOR INSPECTION)	
99-902	LOCTITE APPLICATION, CURE AND AC LINE WRAPPING (QTY 7 - OPTIONAL)	

Travel

Travel is covered under this field action. Towing is covered under this field action.

Note : Please schedule the Technician's 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 : Up to \$40 (USD) may be claimed for consumables, such as Loctite and Permatex, air conditioning line foam insulation and heat wrap, 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.

Claim Codes	
Description	Code
Account Code:	65
Pay Code:	Distributor = X
Pay Code:	Dealer = D
Pay Code:	International = I
Failure Code:	WTHACB

Attachments



[Click here to see c2046_esn-list.xls](#)

(/service/english/attachments/c2046_esn-list.xls)  [Click here to see c2046_x15_repair_process_attachment-b.pdf](#)

(/service/english/attachments/c2046_x15_repair_process_attachment-b.pdf)

Engine Family	Fuel System
ISX, QSX15 ISX15	
Design Application	Market Application
Automotive	Automotive

Last Modified: 14-Aug-2018



X15 CM2350 X114B/X116B Turbo Actuator Water Intrusion Correction Campaign

Campaign Service Step By Step Repair Process

C2046

8/3/2018

X15 CM2350 X114B/X116B Turbo Actuator Water Intrusion Correction Campaign

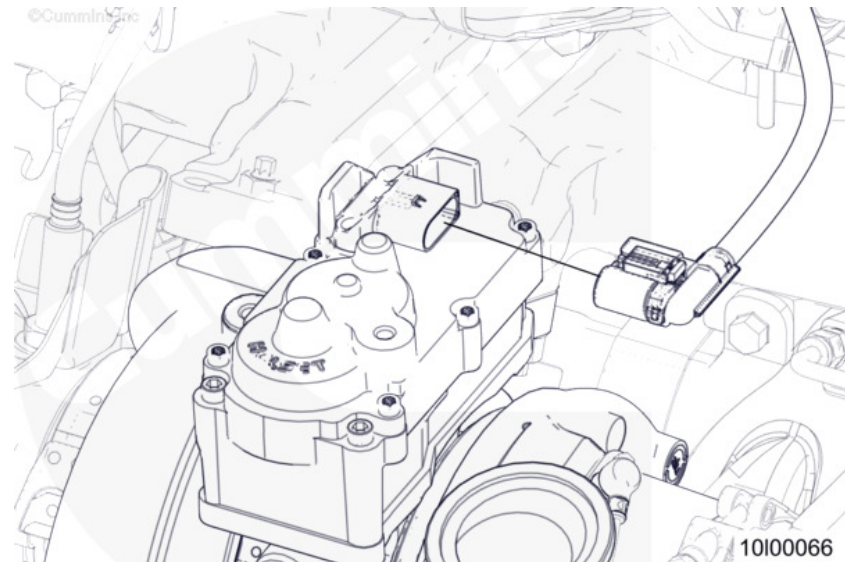
1. Repair Process to complete the campaign request

- Clean actuator and Apply the Loctite 290 and Permatex silicone sealant per below process Page 4-11.
- Install insulating foam tape and reflective heat shield tape on the OEM air conditioning line per bellow process Page 12-15.

***Clean Actuator and Apply the Loctite 290 and Permatex Silicone
Sealant - Page 4-11***

Safety & Preparation

- Review Quickserve document 204-006 General Safety Instructions
 - <https://quickserve.cummins.com/qs3/portal/service/manual/en/5411186/>
- Turn key switch OFF. Disconnect the VGT actuator from the engine harness.



Materials Needed To Complete the Loctite and Permatex Process

Obtain the following Material

1. Loctite 290

- Cummins Part Number -Description
 - 3823682 Threadlocker - Green (50 ml. bottle)
 - 3824039 Threadlocker - Green (10 ml. bottle)*

2. Permatex Flowable Windshield & Glass Sealer

- Manufacturer Part Number: 81730-1
 - *10 ml bottle will be sufficient for 6-7 applications

3. QD Contact Cleaner

- Cummins Part Number – 3824510

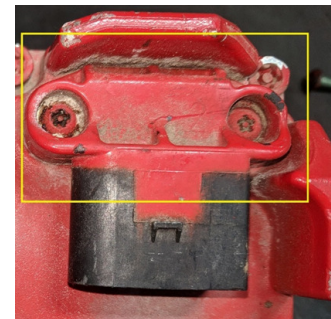
Use proper protective equipment for the following steps



US Part Number: 81730
Canada Part Number: 59165

Cleaning and Preparation

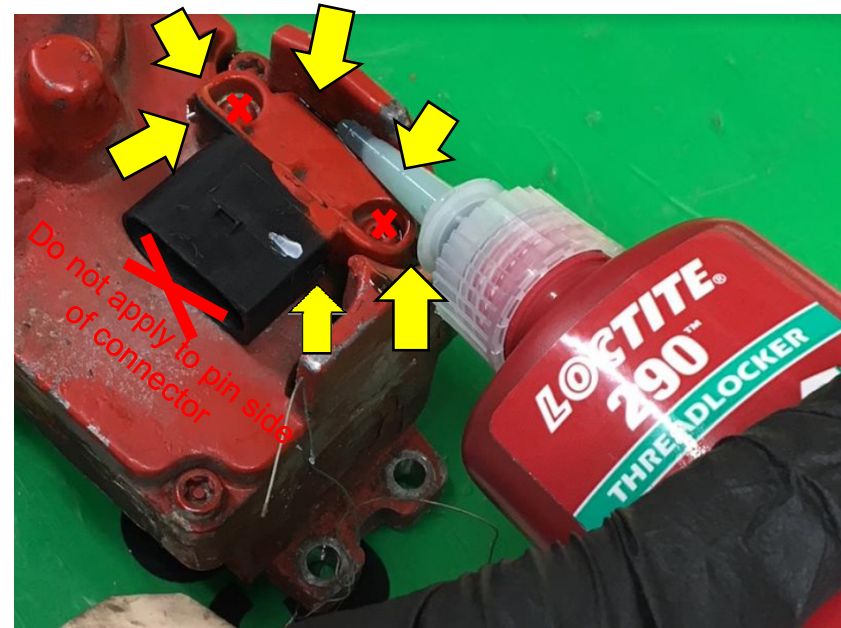
- Wipe the AC line to remove moisture on it
 - Ensure water does not drop on the actuator while cleaning
 - Remove loose dirt and debris from around the VGT Actuator with a brush as shown
 - Use shop air to remove any loose debris
 - Apply QD Contact Cleaner (Cummins PN 3824510) and use a brush around the connector removing as much oil and dirt as possible.
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- **DO NOT SPRAY THE QD CONTACT CLEANER ON THE TURBINE HOUSING WHEN IT'S HOT!!**



Area of connector requiring a detailed cleaning

Loctite 290 Application

1. Apply a liberal amount of Loctite 290 around the entire black plastic connector body where it meets the aluminum actuator cover.
- DO NOT APPLY TO THE PIN AREA OF THE CONNECTOR.
 - TRY TO AVOID LOCTITE ON THE CAPSCREWS OF THE CONNECTOR.
 - There is time to clean up any excess.
 - The Loctite 290 will wick under the plastic cover and fill any gaps that may lead to a leak path.



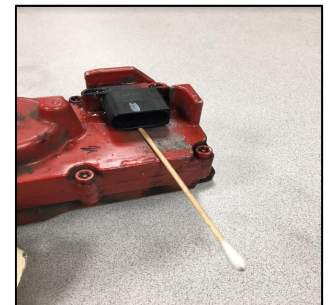
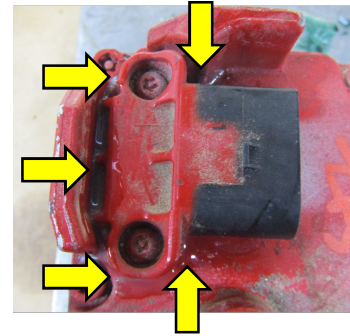
Loctite 290 Application

1. Check for Loctite 290 around the entire plastic connector body
2. Wait for 5 minutes to allow Loctite 290 to wick into the hidden crevices
3. Wipe away excess Loctite 290 from the connector and actuator with a lint free cloth.



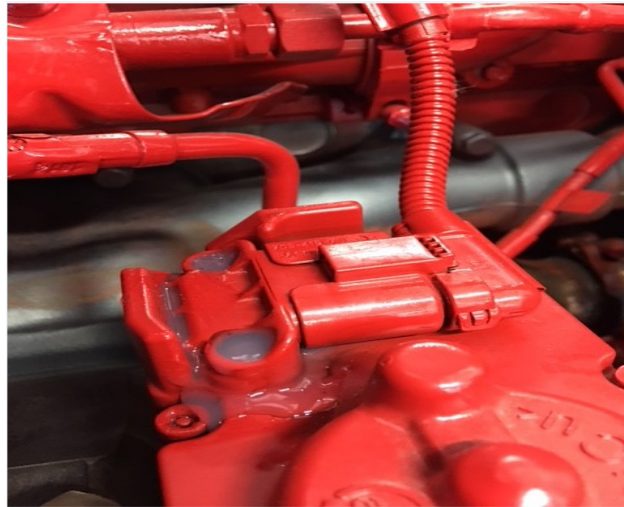
Apply Permatex Silicone

- Apply Permatex silicone around the plastic connector body as shown by arrows
- Apply on the top of the connector mounting screws
- Apply silicone on the edges shown as shown and using a swab stick to smear the silicone underneath the connector to make a thin layer at the VGT actuator connector interface
- Using a white paint marker, apply a witness mark “X” as shown in the picture
- Witness mark confirms the repair has been applied to this actuator



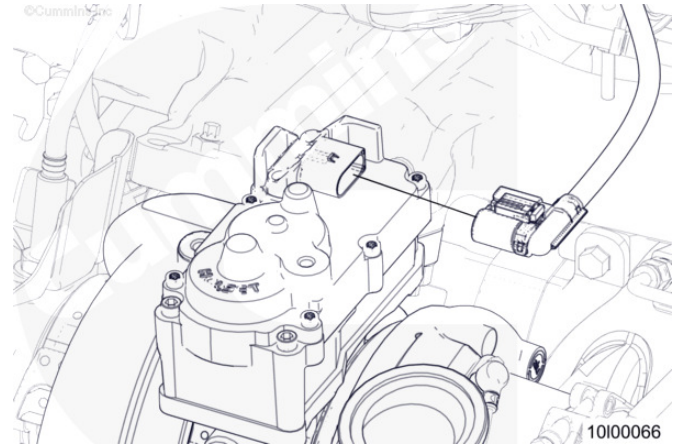
Curing Time

- Expect the Loctite to cure in 2 hours after the vehicle returns to service
- Expect the Permatex silicone to be tack-free in 1 hour
- Full cure of Permatex within 24 hours after application



Completion Steps

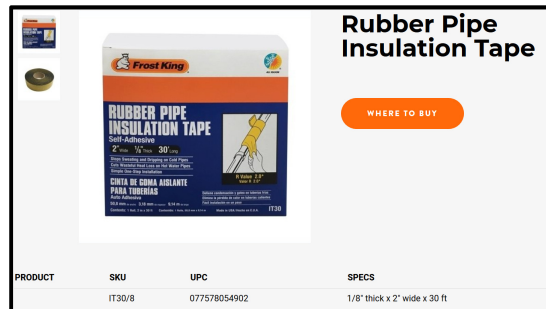
- Reinstall engine harness connector to the Variable Geometry Actuator.
- Reinstall any clips or wire ties that were disturbed.
- To enable optimum curing, we recommend you do not idle the engine with AC ON after application of Loctite/Permatex
- Wipe the AC line to make sure it doesn't have moisture on it
- **Complete the AC Line Wrap with Insulating Foam tape & Reflective tape as describe in page 13.**
- Return to service as soon as possible after Loctite and AC Line Wrap repair is completed



Install Insulating Foam Tape and Reflective Heat Shield Tape on the OEM Air Conditioning Line - Page 12-15.

Materials Needed To Complete the AC Line Suction Tube

1. Insulation Foam Tape

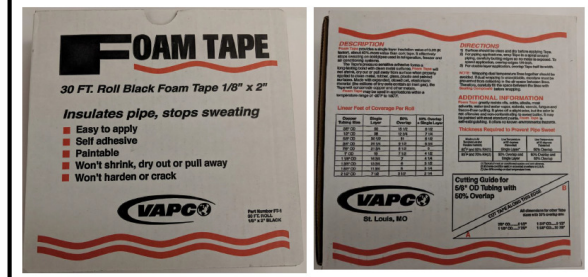


Insulating Foam Tape

OR

- Manufacture:- Frost King
- Part Number :- SKU(IT30/8), UPC (077578054902)
- 1/8" thick x 2" wide x 30'

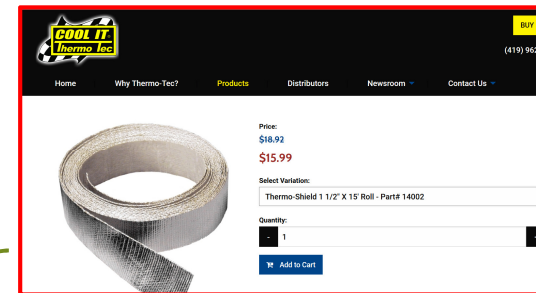
Material: Cross-linked Polyethylene Foam



Insulating Foam Tape

- Manufacture:- Vapco
- Part Number :- FT-1

2. Reflective Heat Shield Tape



Reflective Heat Tape

OR

- Manufacture:- Cool It Thermo Tec – Thermo Shield
- Part Number :- 14002 (1 1/2' X 15' Roll)



Reflective Heat Tape

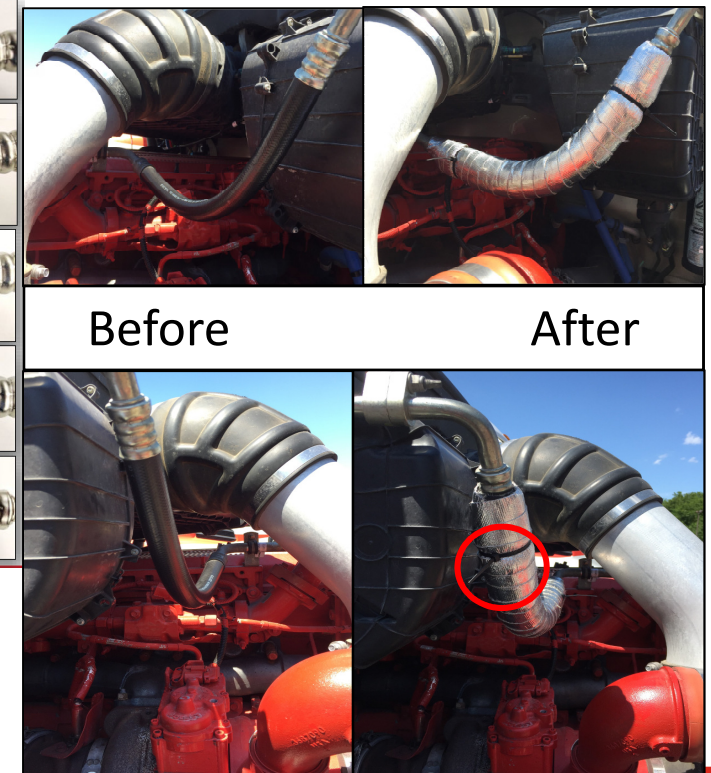
- Manufacture:- DEI
- Part Number :- 010408

3. Zip Ties



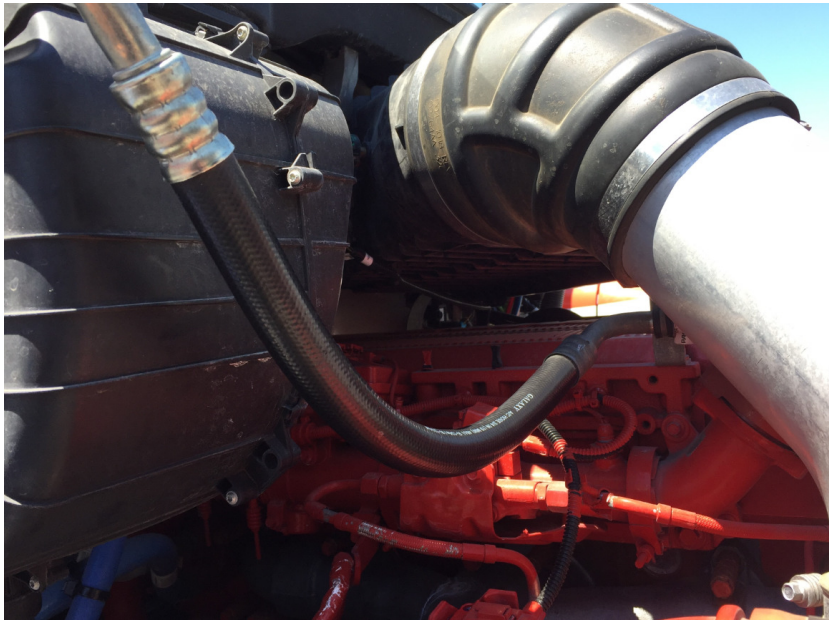
AC Line Insulation Procedure

1. Clean Hose – Remove any oil/dirt
2. Wrap Suction Hose with two layers of cross-linked polyethylene insulating foam tape
 - Target 15' (2 ~7.5' sections) of Insulation tape
3. Apply Final wrap to the suction hose with a reflective heat shield tape
 - Target 10' of Thermo-Shield Wrap
4. Secure the wrap in place using two zip ties on each end of the wrap
 - Target 2' inches from the end
5. Make sure the tail of the zip tie is pointed towards the ground as pointed out



Installation

Before



After

