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11.2014	11.2016	3	1(14)

Rev B This document supersedes previous versions
Dec 5, 2014 Changed 046562 to include tie wrap and exhaust gasket.

UREA DOSING SYSTEM UPDATE Prevost vehicles

DESCRIPTION

On the vehicles affected by this bulletin, perform a software update of EMS and ACM to modify the dosing strategy. The software will also improve urea dosing valve behavior at shutdown and key-on.

As an additional improvement, replace the urea dosing valve by an improved design and modify coolant hose routing to the dozer valve to provide additional cooling at engine shutdown.

Vehicles from B-5064 up to C-5259 will require one additional overhead hose support.

These hardware and software improvements aim to reduce the occurrence of clogging and shorting of the Urea Dosing Valve.

Programming must be performed by a tech tool trained technician.

MODEL YEAR(S) AND VEHICLES INVOLVED

NOTICE TO SERVICE CENTERS	
<i>Verify vehicle eligibility by checking warranty bulletin status with SAP or via ONLINE WARRANTY SYSTEM available on Service / Warranty tab of Prevost website.</i>	
Model	VIN
X3-45 coaches Model Year : 2011 - 2014	From 2PCG33491BC73 <u>5064</u> up to 2PCG33493EC73 <u>5572</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.	

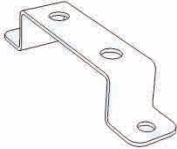
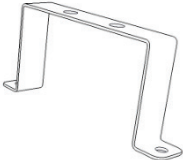
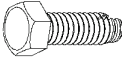
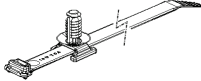
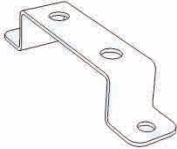
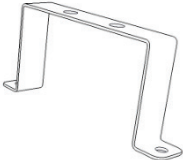
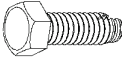
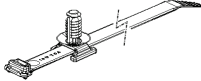
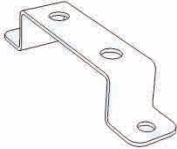
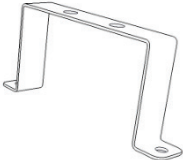
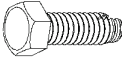
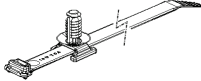
Special Bulletin

SP14-320B

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MATERIAL NEEDED

Order kit **SP14-320** which includes the following parts:

Part No.	Description	Qty																					
22391563	Urea dosing valve	1																					
046562	Coolant hose relocation /support kit, Includes:	1																					
	<table border="0"> <thead> <tr> <th>No</th> <th>Description</th> <th>Qty</th> </tr> </thead> <tbody> <tr> <td></td> <td>261629 Hose Support</td> <td>1</td> </tr> <tr> <td></td> <td>261630 Hose Support</td> <td>1</td> </tr> <tr> <td></td> <td>502848 Screw, Thread Cutting , 1/4-20</td> <td>4</td> </tr> <tr> <td></td> <td>504750 Fir Tree Push Mount Cable Tie</td> <td>4</td> </tr> <tr> <td>---</td> <td>504737 High temp Cable tie</td> <td>10</td> </tr> <tr> <td>---</td> <td>21095726 V-Clamp Gasket</td> <td>2</td> </tr> </tbody> </table>	No	Description	Qty		261629 Hose Support	1		261630 Hose Support	1		502848 Screw, Thread Cutting , 1/4-20	4		504750 Fir Tree Push Mount Cable Tie	4	---	504737 High temp Cable tie	10	---	21095726 V-Clamp Gasket	2	
No	Description	Qty																					
	261629 Hose Support	1																					
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	502848 Screw, Thread Cutting , 1/4-20	4																					
	504750 Fir Tree Push Mount Cable Tie	4																					
---	504737 High temp Cable tie	10																					
---	21095726 V-Clamp Gasket	2																					

Other parts that may be required:



Part No.	Description	Qty
261629	Hose support	1
504750	Fir Tree Push Mount Cable Tie	2
502622	Hex Cap Screw M6-1.0x20 SS / Xylan Black	3

NOTE

Material can be obtained through regular channels.

REQUIRED TOOLS

Software:
Premium Tech Tool & Com interface.

CORDLESS DRILL 	RIGHT ANGLE DRILL 
HOSE PINCH PLIERS 	RATCHET AND SOCKET SET – METRIC/SAE 
METRIC OPEN END WRENCH SET 	TORQUE WRENCH AND METRIC SOCKET SET 
“Jimmy” PRY BAR 	STUBBY LENGTH (Short) DRILL BIT Ø 7/32 
MEASURING TAPE 	LARGE FLAT SCREW DRIVER 

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SOFTWARE UPDATE

Identify engine variant US10/OBD13 or GHG14 with valve cover (Fig. 1 & 2)

Software updates should be performed by technicians trained in PTT.

US10 and OBD13 Vehicles

Update according to steps **A** and **B** below.

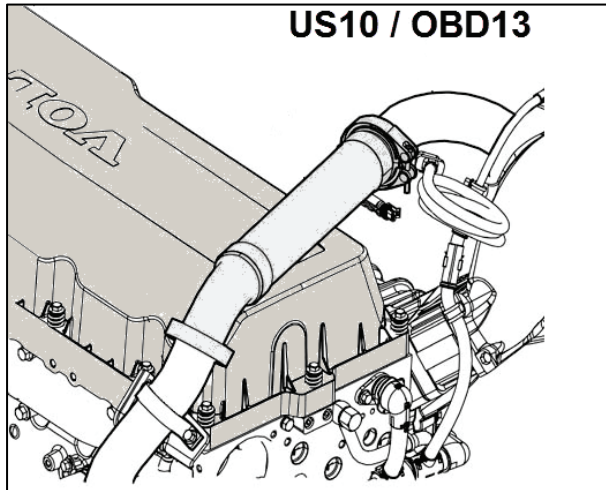


Figure 1 US10 / OBD13 Valve cover

GHG14 Vehicles

(From E-2602 & E-5625)

Update according to steps **A** et **B** below. And add a VECU update
GHG14 engines have a "split" cover (Fig 2).

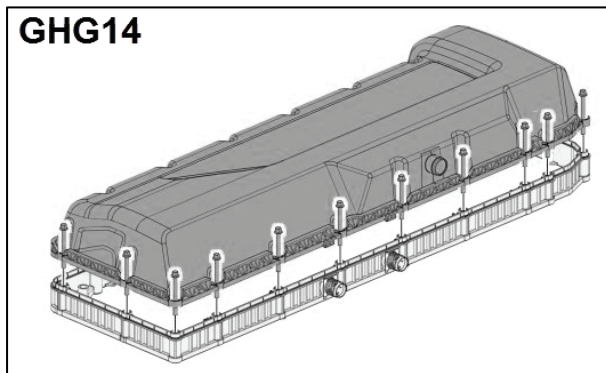


Figure 2 GHG14 valve cover

- A.** Connect PTT to the vehicles diagnostic receptacle (DDR or OBD)
- B.** Update in the following order: ECM, ACM and VECU (VECU update is required only for GHG14 vehicles)

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HARDWARE UPDATE

Make sure Vehicle has cooled down before performing any work. Exhaust components remain hot. Perform the replacement of the urea dosing valve (by an improved design) and modify coolant hose routing to the dozer valve to provide additional cooling at engine shutdown.

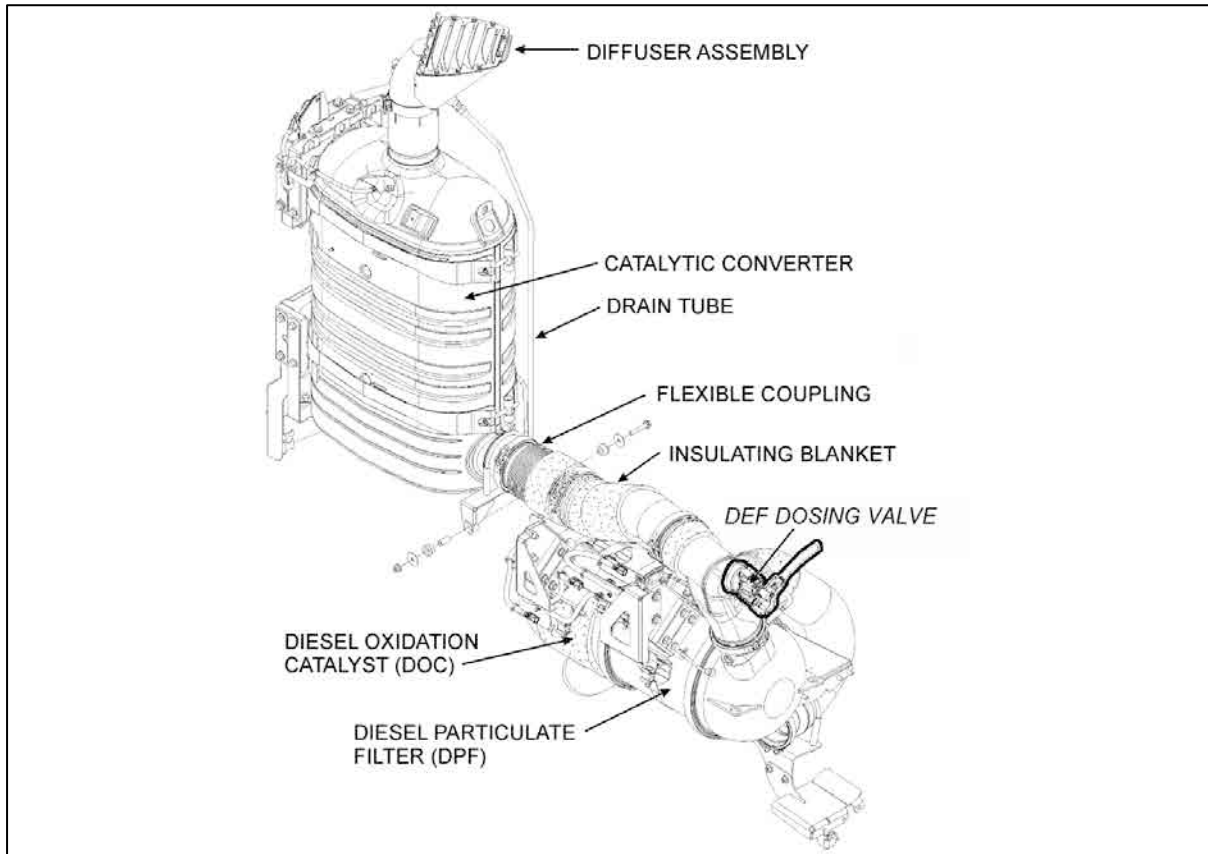


Figure 3: Exhaust System overview



WARNING

Diesel Exhaust Fluid (DEF) is an eye and skin irritant and may migrate and cause corrosion in electrical components.

Refer to the various recommendations regarding DEF in Section 04 of maintenance manual.

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Dosing valve replacement

1. Gaining Access.

To open the engine compartment rear doors, open the engine compartment curb side door (1, fig. 4).

Pull on the rubber covered handle rod located along the rear door, close to the bottom door hinge.

This releases the rear engine door lock.

Open the rear engine doors (2, fig. 4)

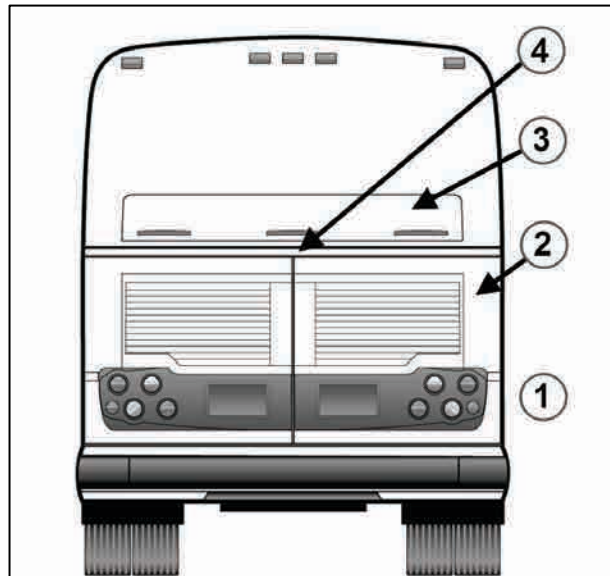


Figure 4: Door opening sequence

2. Open the Exhaust aftertreatment access door (3, fig. 4) by lowering the latch release bar (4, fig. 4) & (Fig. 5) with the help of a screwdriver. (Fig. 6)

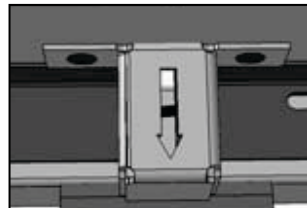


Figure 5: Latch release

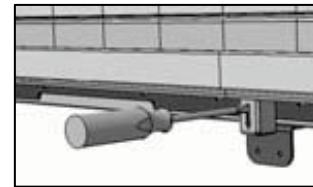


Figure 6: Latch operation

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3. Relieve coolant system pressure.
4. Pinch and disconnect coolant lines.
5. Depress yellow buttons to release quick coupling.
6. Prepare a suitable container to catch any coolant dripping.
7. Mark hose connections to ensure proper reconnection.
8. Detach hoses where they are attached to the ceiling.

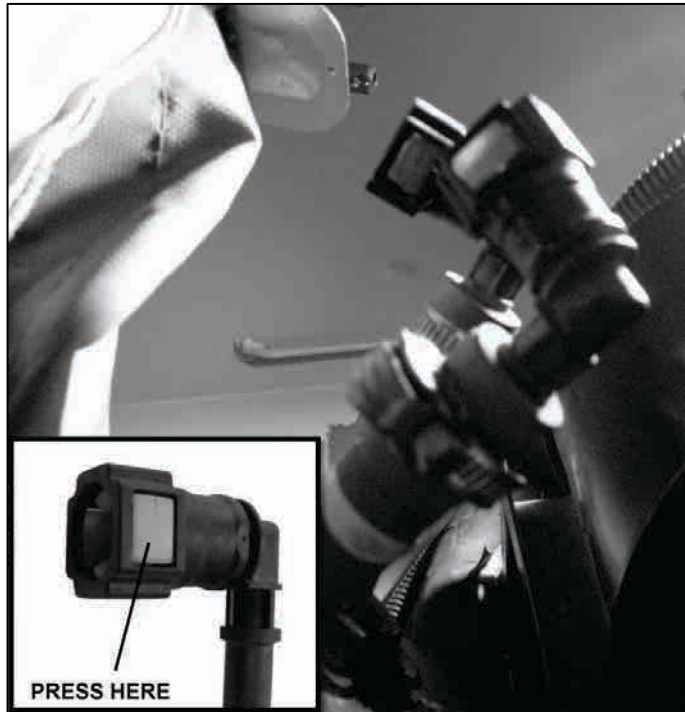


Figure 7

9. Remove electrical connector.
10. *Protect from DEF contamination by taping a plastic bag over the connector.*
11. Disconnect DEF line.

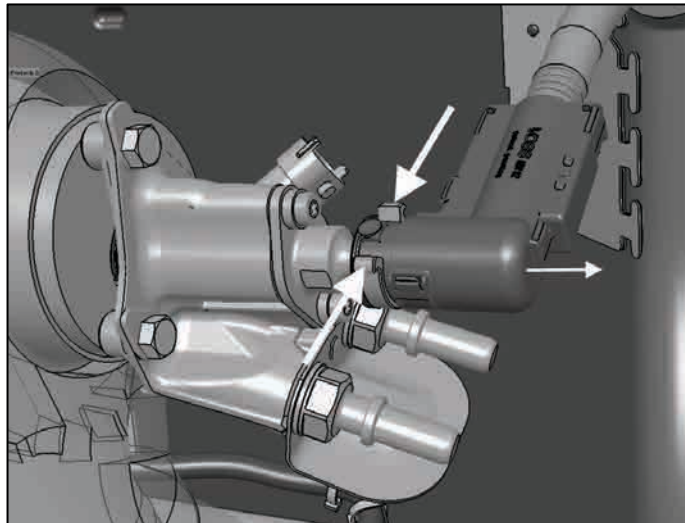


Figure 8

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12. Remove the three bolts on the urea dosing valve.

Use **M10** socket

Re-use hardware.

If hardware is lost or damaged, replace with **502622**.

Reserve valve for warranty claim process.

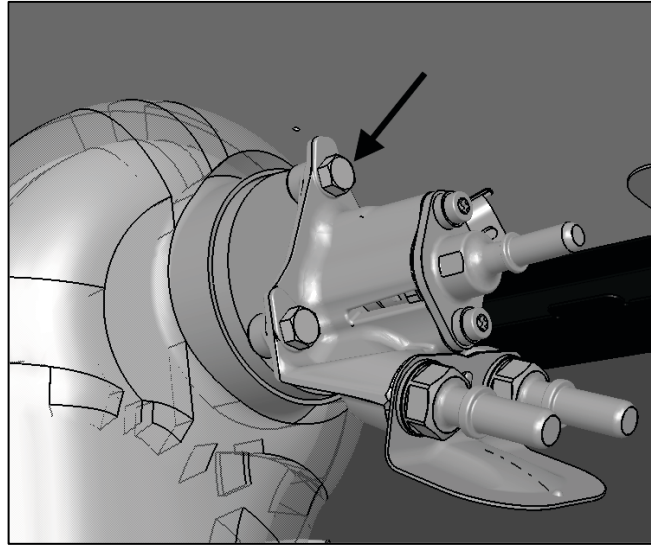



Figure 9

13. Install new Urea Dosing valve **22391563** supplied with kit.

14. Tighten bolts to 7.5 lbf-ft

	WARNING
When handling exhaust insulating sleeves, DPF or any other exhaust component, ensure adequate ventilation, always wear approved eye protection, a properly fitted and suitable respirator to avoid inhalation. Wear protective clothing with long sleeves. Wear gloves.	

15. Open the insulating blanket on the swirl pipe. Wear appropriate protection.

Remove the outlet temperature sensor. Use a 17mm open end wrench.

Protect and attach away from work zone.

16. Remove insulating blanket on flexible coupling

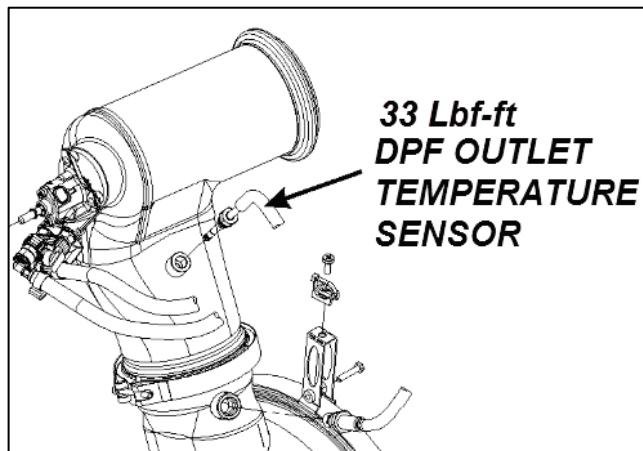


Figure 10

17. Remove clamps at swirl pipe inlet and flexible coupling inlet.

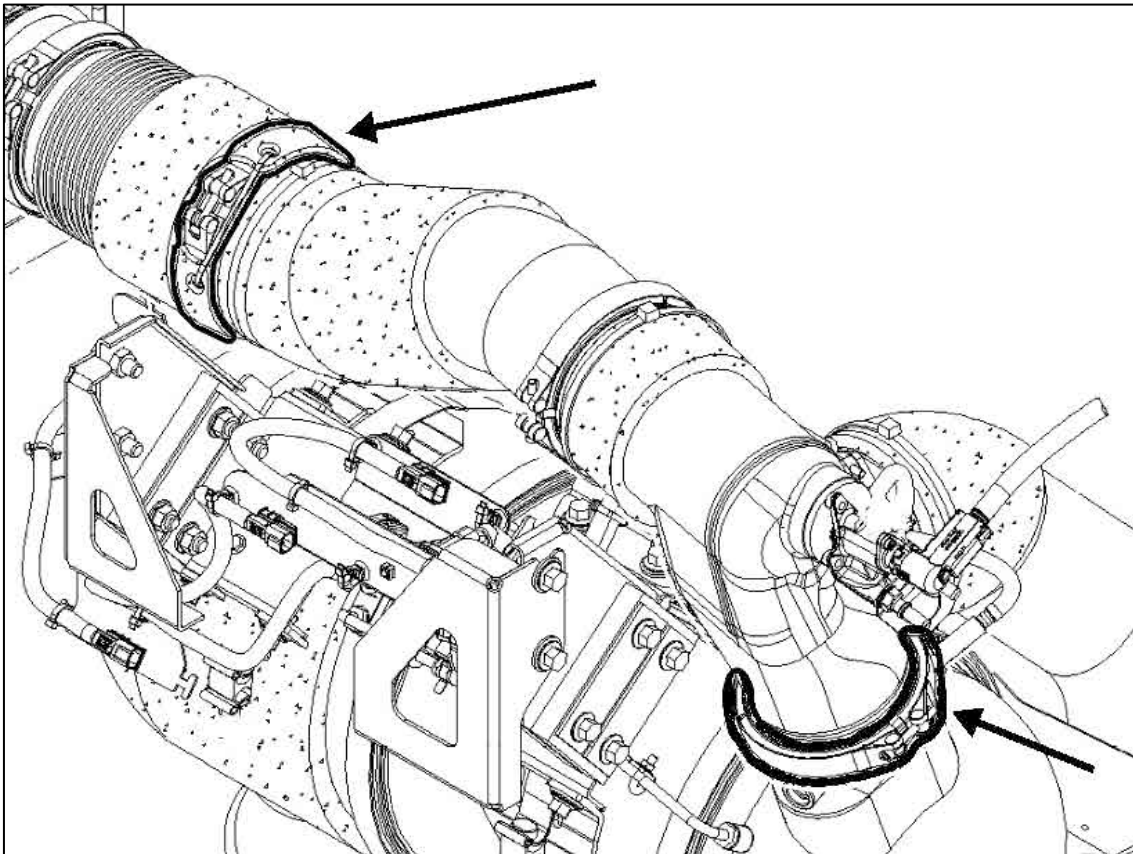


Figure 11

Tilt pipe assembly backwards to create some working space.

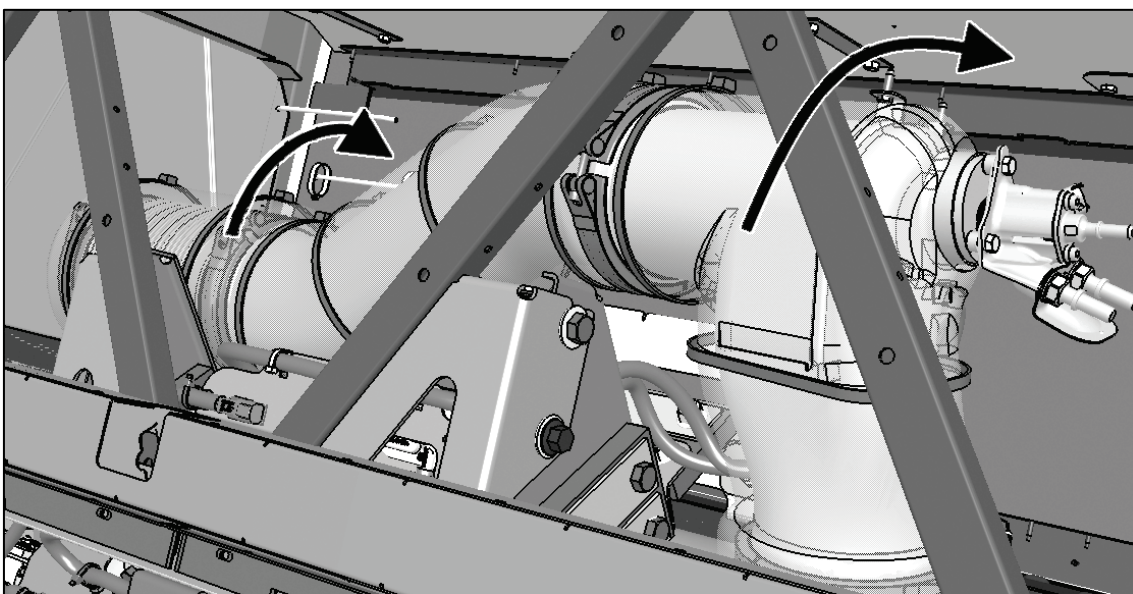


Figure 12

18. Mark drilling pattern for **261629** and **261630**, using brackets for hole pattern.
19. For **261629**, as a reference for measures, use wall and exhaust well edge (above exhaust bellows section) (Fig 14 or 15)
20. Vehicles from **B-5064** up to **C-5259** included require two **261629** brackets, (Fig. 14, 17)
21. Vehicles after **C-5260** included require one **261629** bracket, (Fig 15, 17).

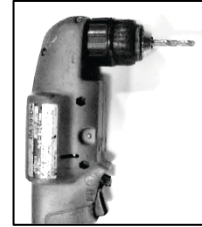


Figure 13

22. For **261630**, use existing hose management bracket as a reference.
 23. Use a short neck drill fitted with a 7/32" stubby length (short) drill to make holes.
- Tip: Use a pry bar to exert vertical force on the drill.*

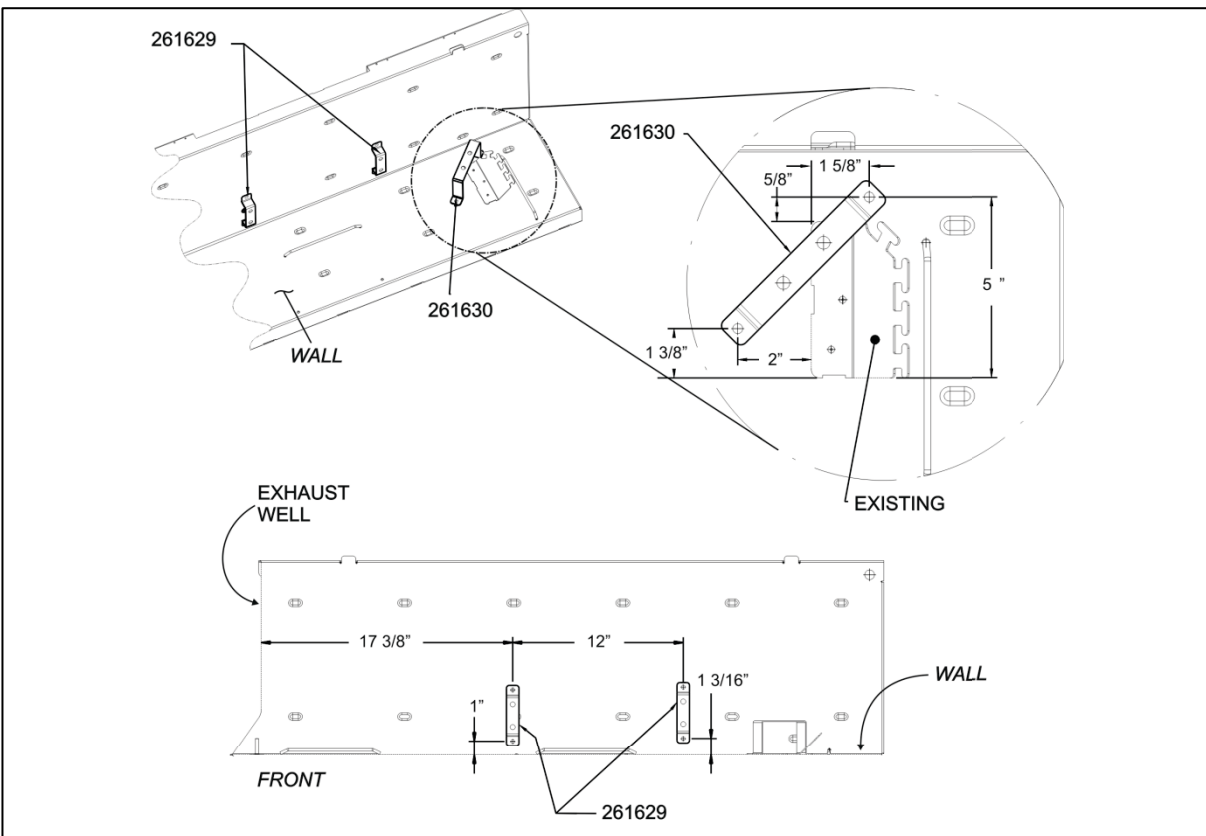


Figure 14 Support Layout for Vehicles From B-5064 up to C-5259 incl.

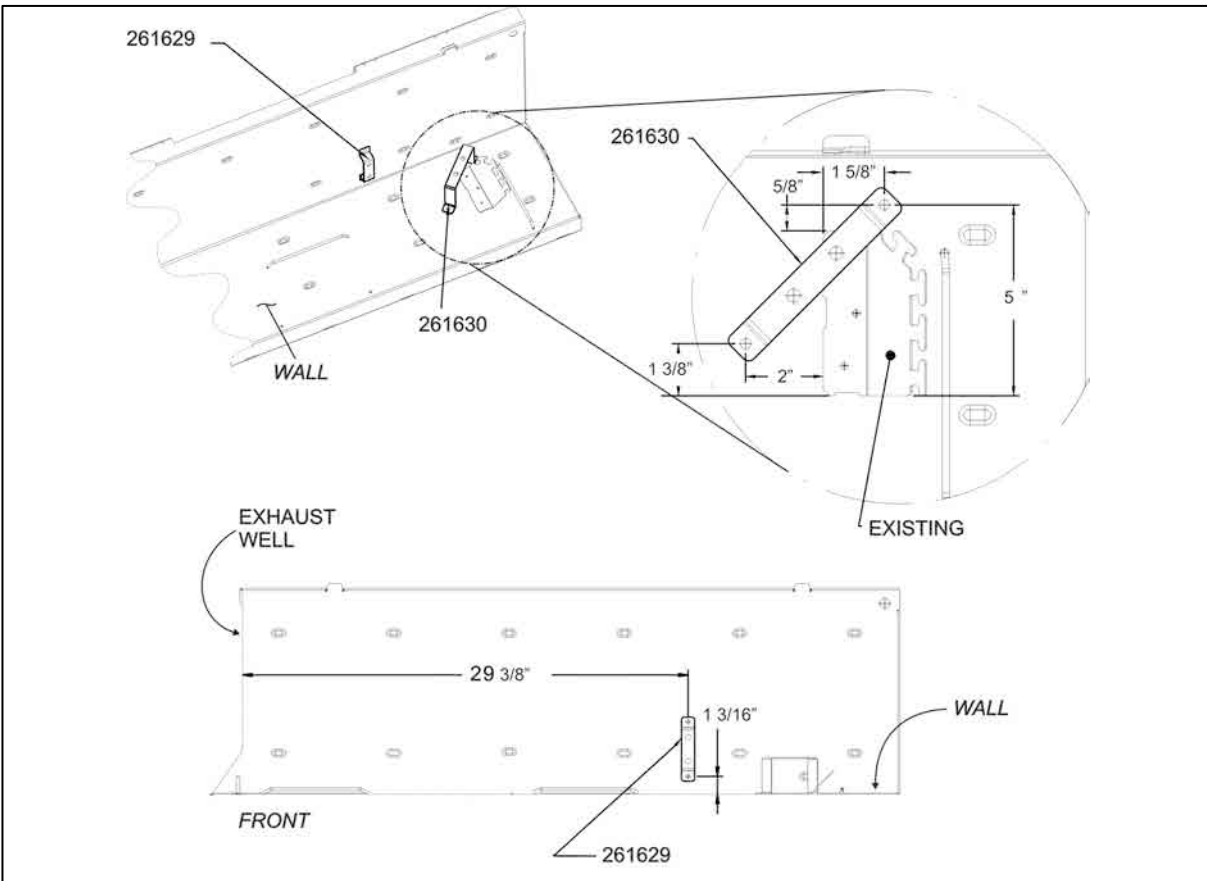


Figure 15 Support Layout for Vehicles From C-5260 incl.

24. Assemble bracket **261630** and **261629** with **502848** thread cutting screws. Use a 3/8 socket.

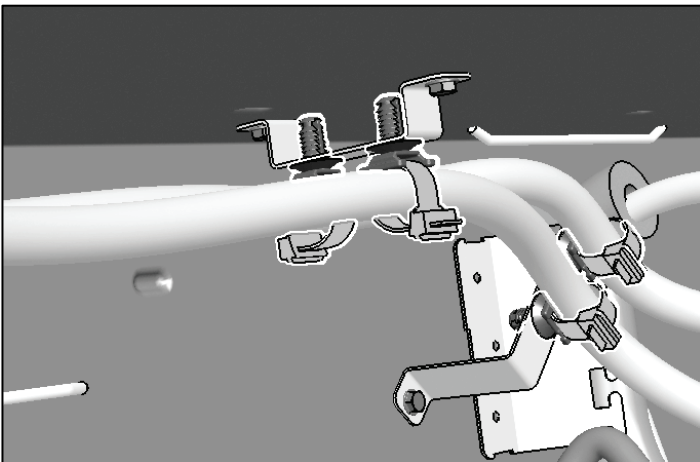


Figure 16

25. Assemble coolant hoses with fir tree push mount cable ties (fig. 15). *Do not tighten cable ties.*

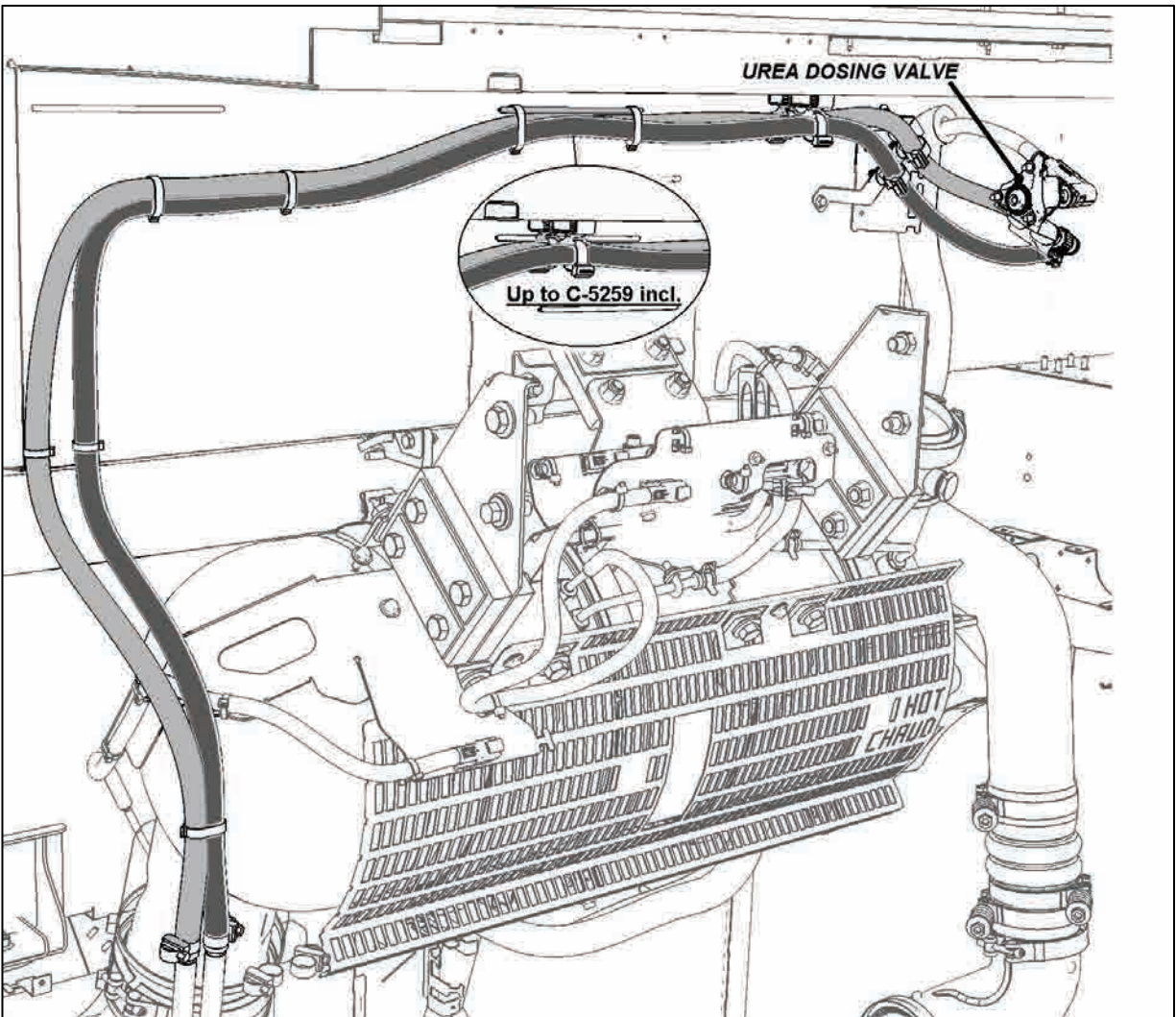


Figure 17

26. Route hoses according to figure 14. *Do not tighten cable ties to allow adjustments.*
27. Adjust the length of the hoses to dimensions in fig 17.
28. Tighten all cable ties

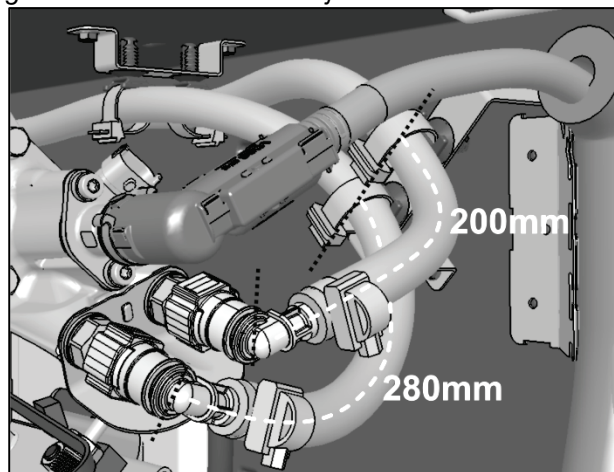


Figure 18

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- 29. Re-assemble pipe assembly.
Tighten V-clamps to **8 lbf-ft**
Change V-Clamp gasket #**21095721** if required.

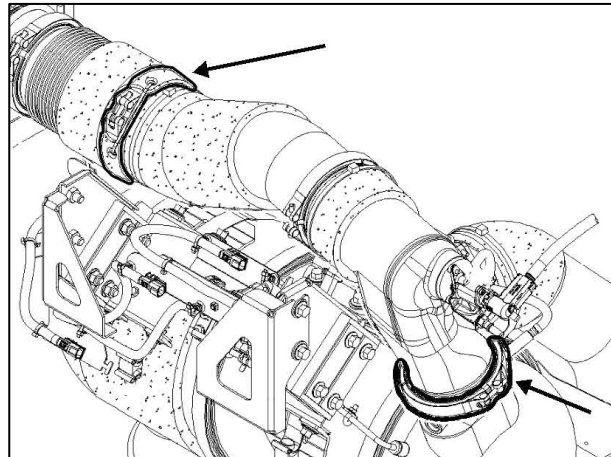


Figure 19

- 30. Re-assemble temp sensor.
Tighten to **33 lbf-ft**
- 31. Replace insulating blanket on exhaust pipes
Use high temp cable ties **504737**.

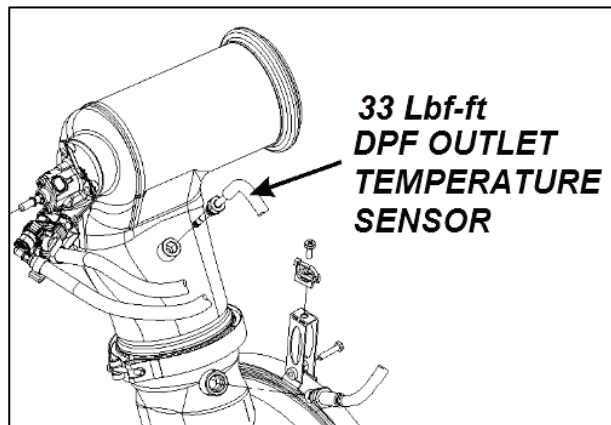


Figure 20

- 32. Ensure proper operation.
Inspect for any leaks.

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PARTS / WASTE DISPOSAL

All replaced parts must be returned to Prevest according to the Return Shipping Instructions available on <https://www.prevestcar.com/content/warranty-documents> for full reimbursement. A copy of the warranty claim form must be enclosed with the shipment.

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

ESTIMATED TIME

The time required to perform this special bulletin is approximately three hours (3 h).

OTHER

VBC Bulletin	TBC
Fail Code	04.04-1
Defect Code	09
System Condition	B
Causal Part	21575532

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