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Rev D This document supersedes previous revisions.
Dec 09, 2014 Added road numbers.

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.

These hardware and software improvements aim to reduce the occurrence of clogging and shorting of the Urea Dosing Valve. (SID128 PSID89 FMI4 or 5 & SID128 PSID89 FMI14)

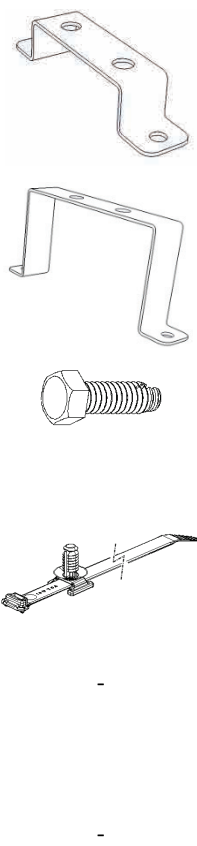
Programming must be performed by a tech tool trained technician.

MODEL YEAR(S) AND VEHICLES INVOLVED

NOTICE TO SERVICE CENTERS	
Verify vehicle eligibility by checking warranty bulletin status with SAP or via ONLINE WARRANTY SYSTEM available on Service / Warranty tab of Prevost website.	
Model	VIN / Road number
X3-45 Commuter Model Year : 2012	From 2PCG33495CC735053 up to 2PCG33495CC735232 incl.
	From DOB 2400 up to 2489
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.	

MATERIAL NEEDED

Order kit **SP14-312** which includes the following parts:

Part No.	Description	Qty																					
046557	Urea dosing valve	1																					
046562	Coolant hose relocation /support kit, Includes:	1																					
	<table> <tr> <th>No</th><th>Description</th><th>Qty</th></tr> <tr> <td>261629</td><td>Hose Support</td><td>1</td></tr> <tr> <td>261630</td><td>Hose Support</td><td>1</td></tr> <tr> <td>502848</td><td>Screw, Thread Cutting , 1/4-20</td><td>4</td></tr> <tr> <td>504750</td><td>X-Mas Tree Base Cable Tie</td><td>4</td></tr> <tr> <td>504737</td><td>High temp Cable tie</td><td>10</td></tr> <tr> <td>21095726</td><td>V-Clamp Gasket</td><td>2</td></tr> </table>	No	Description	Qty	261629	Hose Support	1	261630	Hose Support	1	502848	Screw, Thread Cutting , 1/4-20	4	504750	X-Mas Tree Base Cable Tie	4	504737	High temp Cable tie	10	21095726	V-Clamp Gasket	2	
No	Description	Qty																					
261629	Hose Support	1																					
261630	Hose Support	1																					
502848	Screw, Thread Cutting , 1/4-20	4																					
504750	X-Mas Tree Base Cable Tie	4																					
504737	High temp Cable tie	10																					
21095726	V-Clamp Gasket	2																					

Other parts that may be required:

Part No.	Description	Qty
20805110	Quick Connector 90° 10mm	A/R
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 for US10 vehicles

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

This procedure should be performed by technicians trained in PTT.



DANGER

Park vehicle safely, apply parking brake and stop engine prior to working on the vehicle. Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

1. Connect Premium Tech Tool (PTT) to the vehicle diagnostics connector using the **DDR connector**.
2. Update MID128 Engine Management System (EMS) and MID 233 After treatment Control Module (ACM).

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.

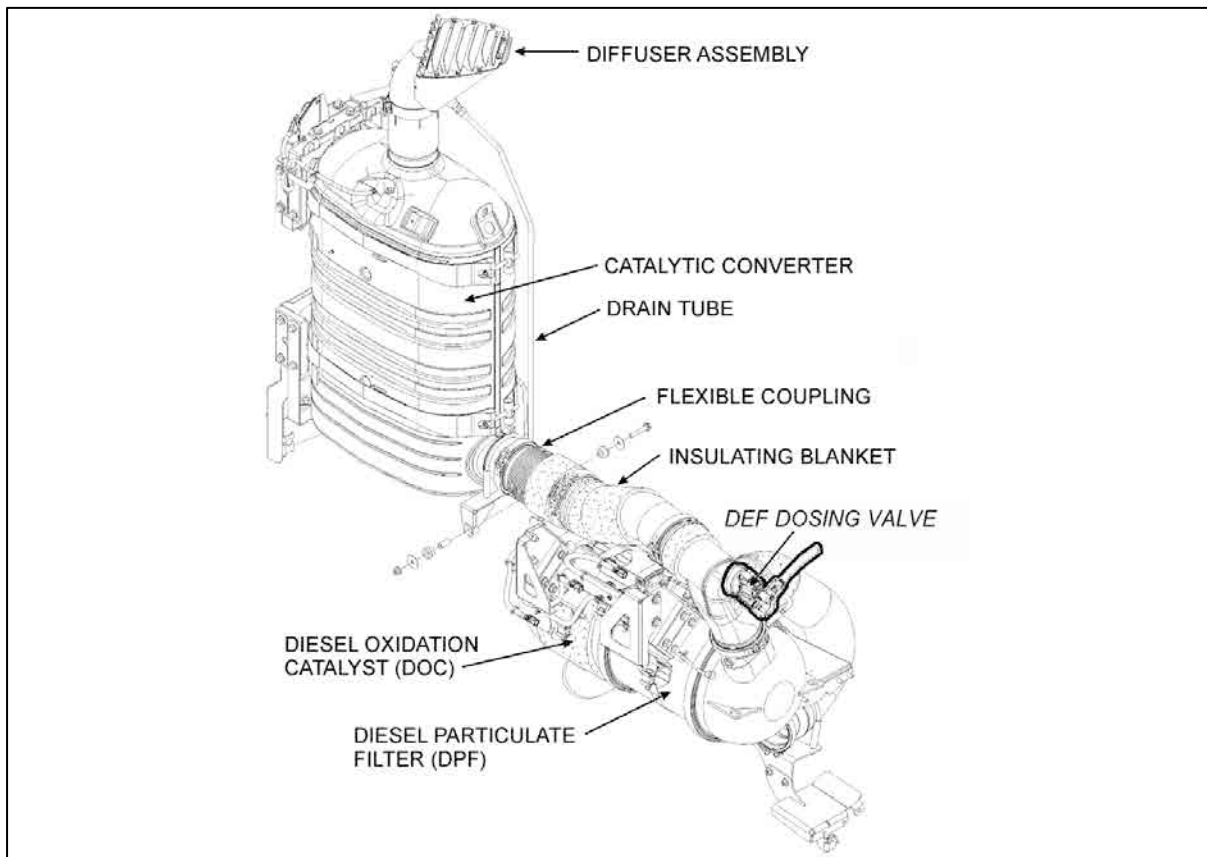


Figure 1: Exhaust System overview



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.

Dosing valve replacement

1. Gaining Access.

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

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. 1)

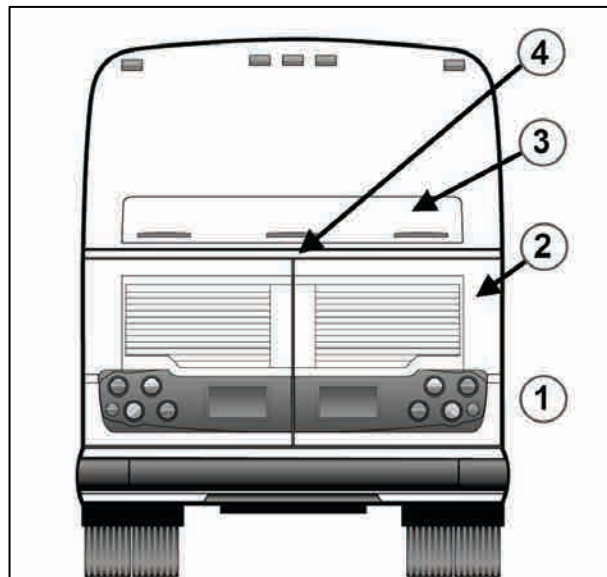


Figure 2: Door opening sequence

2. Open the Exhaust aftertreatment access door (3, fig. 1) by lowering the latch release bar (4, fig. 1) & (Fig. 2) with the help of a screwdriver. (Fig. 3)

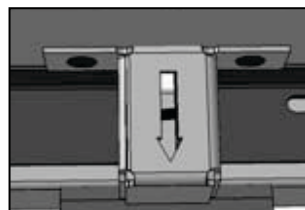


Figure 3: Latch release

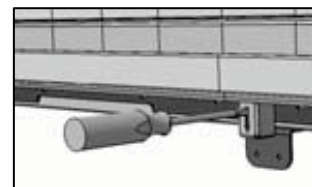


Figure 4: Latch operation

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3. Relieve coolant system pressure at surge tank.
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.

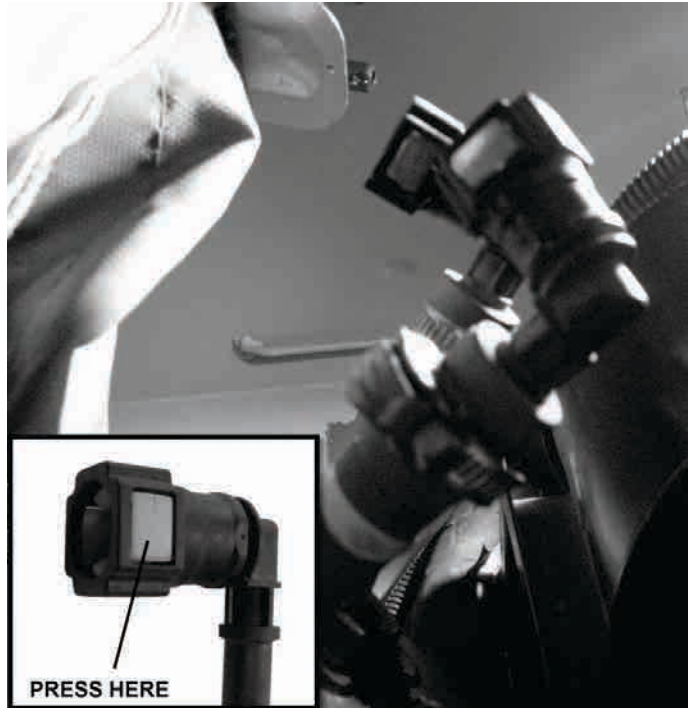


Figure 5

9. Remove electrical connector.
10. *Protect connector from DEF contamination by taping a plastic bag over the connector.*
11. *Protect with a waterproof tarp or plastic sheet all wiring and components in the area under the DEF line from accidental spillage.*
12. Pinch and disconnect DEF line.

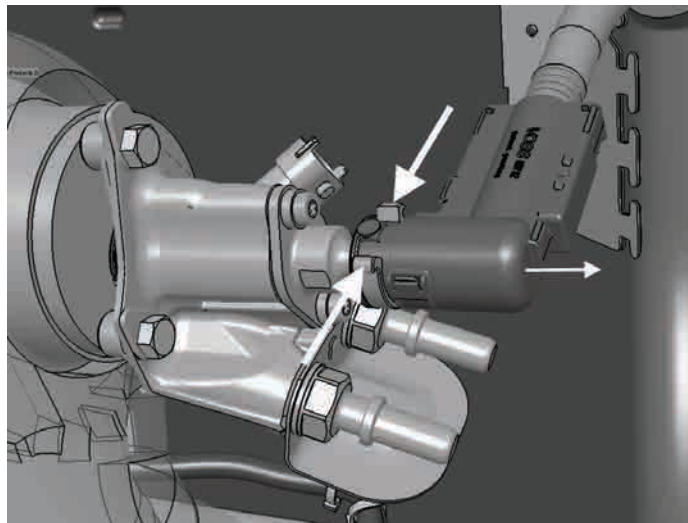


Figure 6

13. 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.

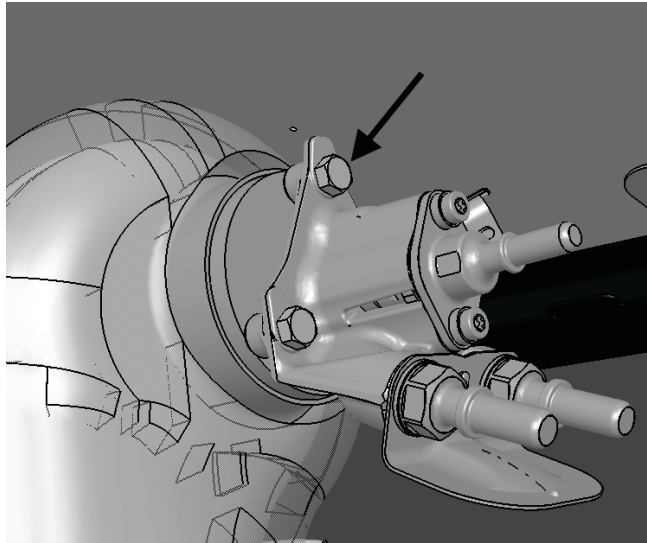


Figure 7

14. Install new Urea Dosing valve **046557** supplied with kit.

15. 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.

16. 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.

17. Remove insulating blanket on flexible coupling

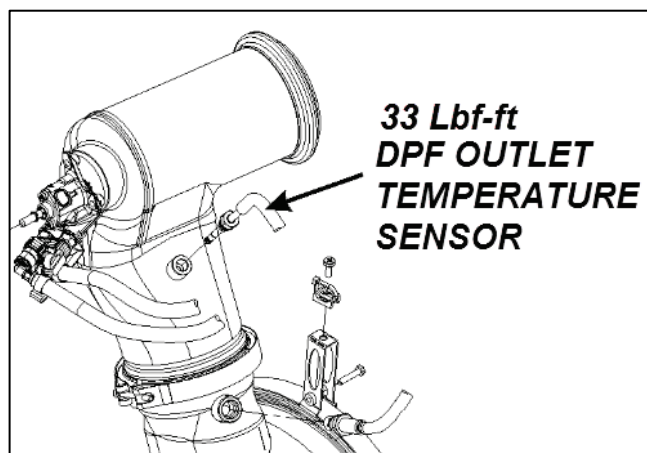


Figure 8

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

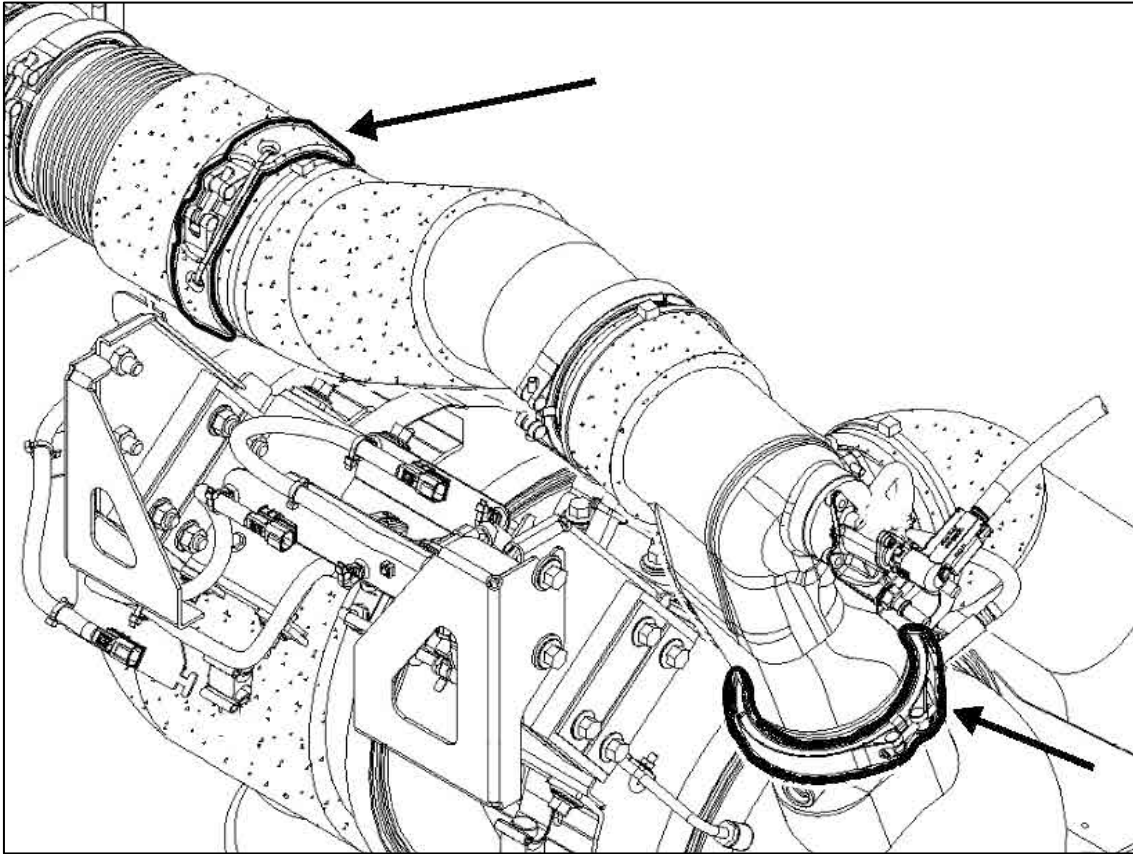


Figure 9

Tilt pipe assembly backwards to create some working space.

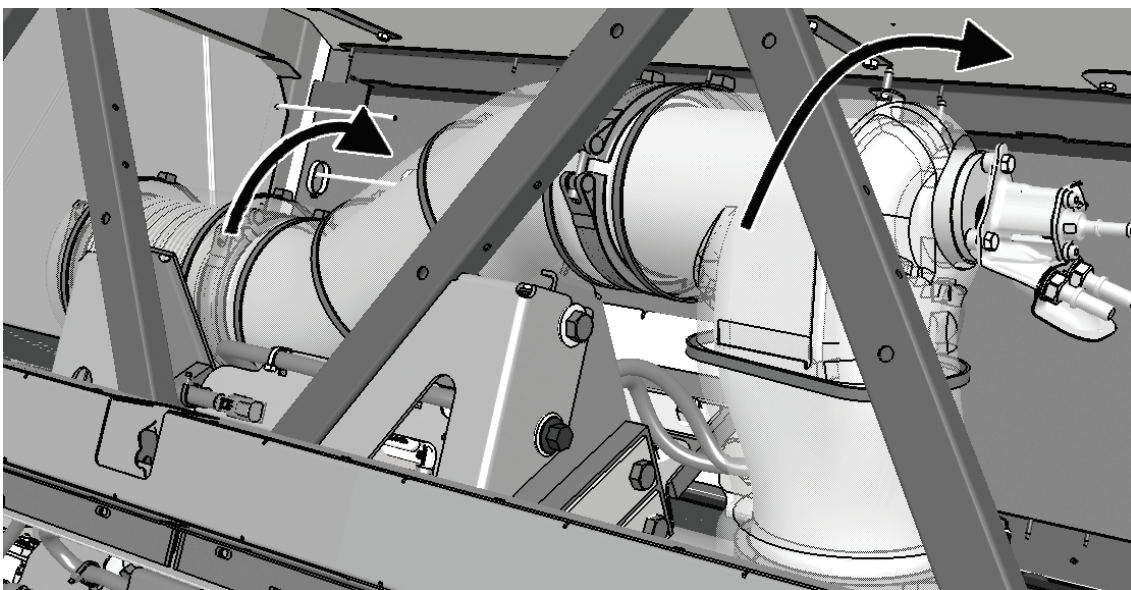


Figure 10

19. Mark drilling pattern for **261629** and **261630**, using brackets for hole pattern.
20. For **261629**, as a reference for measures, use wall and exhaust well edge (above exhaust bellows section) (Fig 12)
21. For **261630**, use existing hose management bracket as a reference.
22. Use a short neck, right angle drill fitted with a 7/32" stubby length (short) drill to make holes. (Fig. 11)

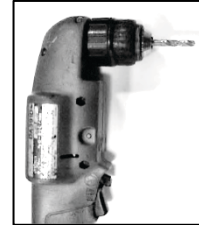


Figure 11

Tip: Use a pry bar to exert vertical force on the drill.

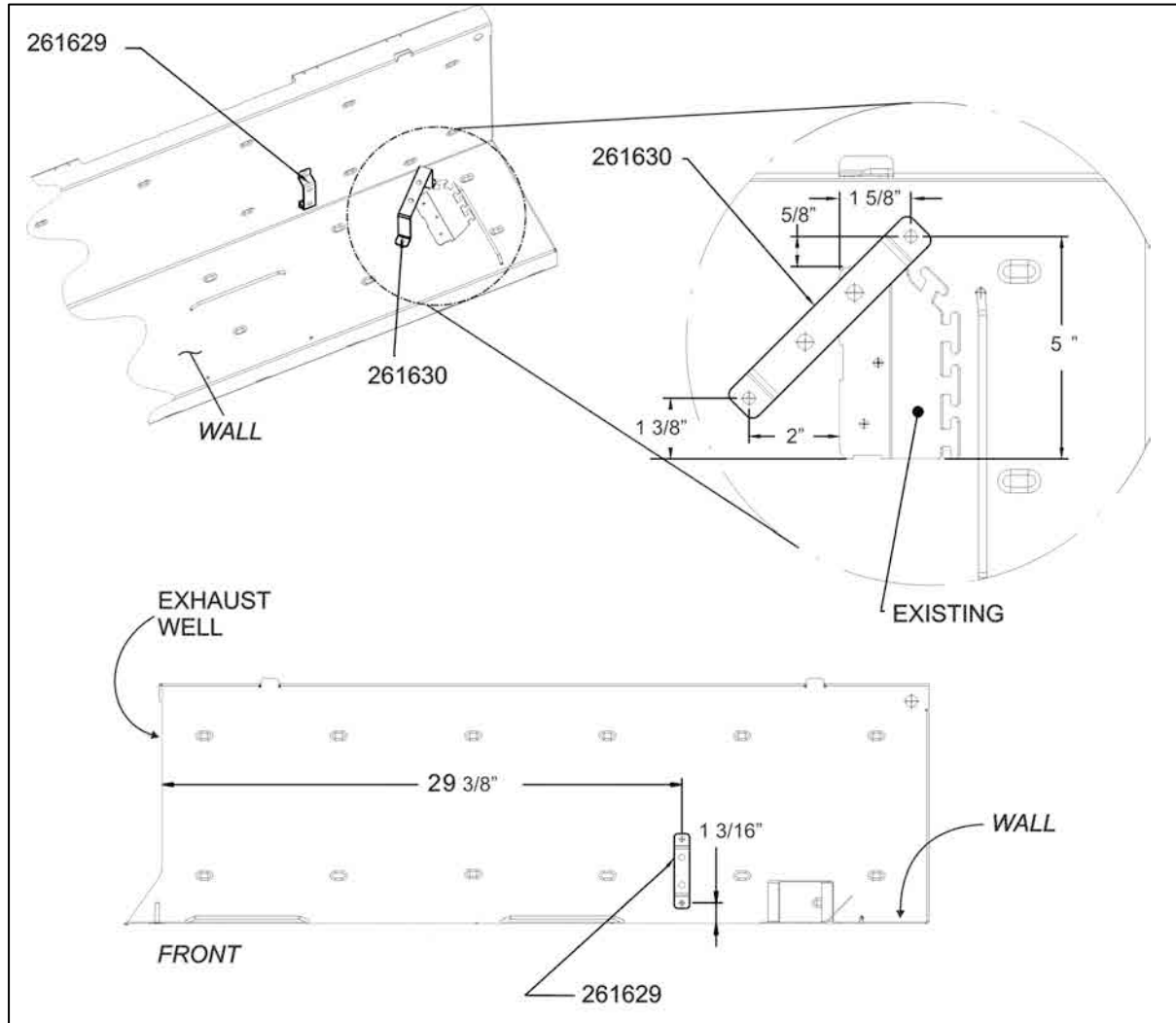


Figure 12

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

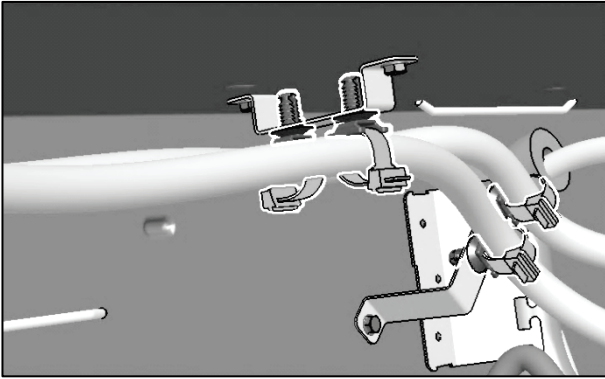


Figure 13

24. Assemble coolant hoses with X-mas tree base cable ties (fig. 13). *Do not tighten cable ties.*

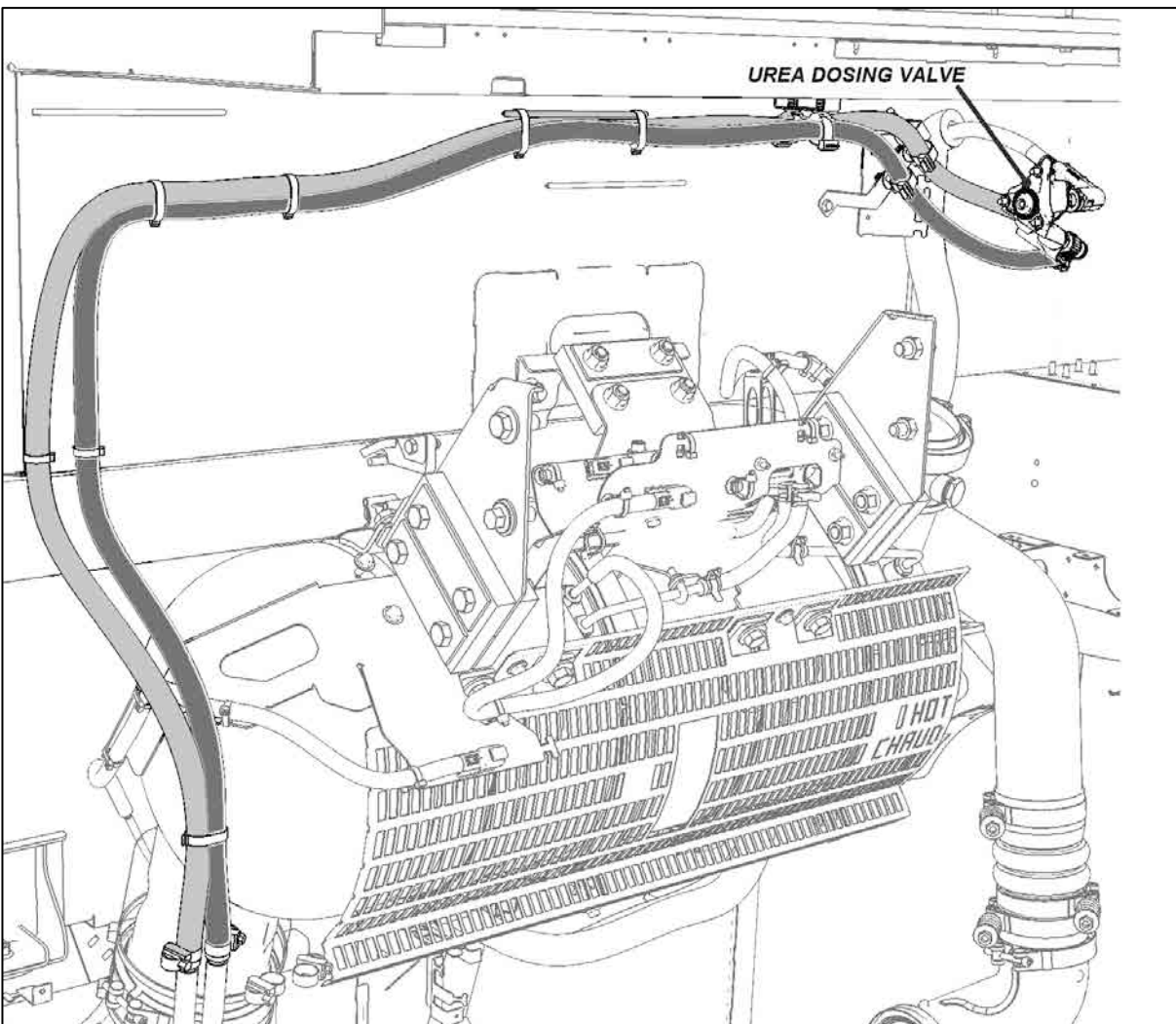


Figure 14

25. Route hoses according to figure 14. *Do not tighten cable ties to allow adjustments.*

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26. Adjust the length of the hoses to dimensions in fig 15.

27. Tighten all cable ties

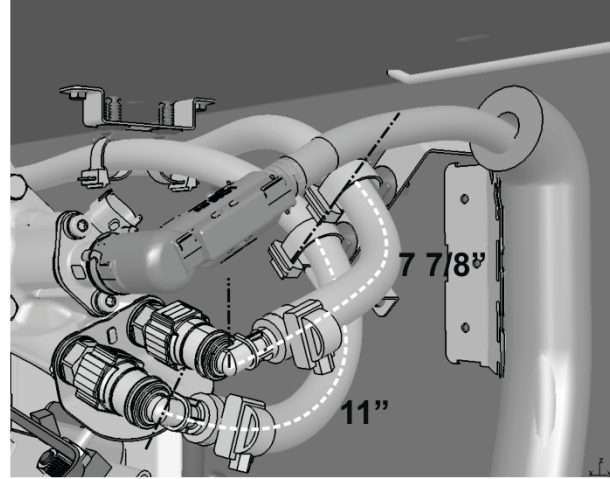


Figure 15

28. Re-assemble pipe assembly.

Tighten V-clamps to **8 lbf-ft**

Change V-Clamp gasket #**21095726** if required.

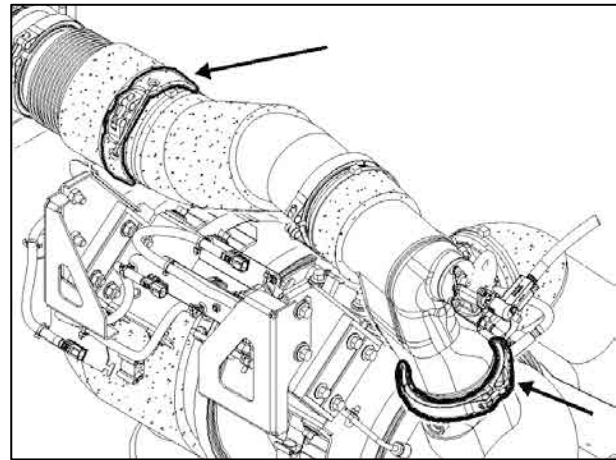


Figure 16

29. Re-assemble temp sensor.

Tighten to **33 lbf-ft**

30. Replace insulating blanket on exhaust pipes

Use high temp cable ties **504737**.

31. Ensure proper operation.

Inspect for any leaks.

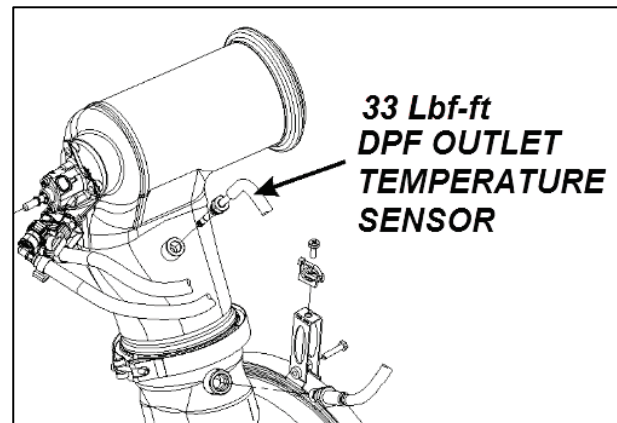


Figure 17

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PARTS / WASTE DISPOSAL

All replaced parts must be returned to Prevost according to the Return Shipping Instructions available on <https://www.prevostcar.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

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