



Volvo Chassis - FSB 284 - 069, Exhaust Particulate Sensor, Repair (2017 Vehicles)



> Internal Content

For more information regarding [FSB 284 - 069, Exhaust Particulate Sensor, Repair \(2017 \)](#) refer to [Impact](#) for the latest updated document.



Tags

[k20793518](#)

[p24d1-00](#)

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[KC-547 FSB 284-069](#)



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FSB 284-069, Exhaust Particulate Sensor, Repair

(November 2021)

Some trucks built between 1/1/2017 and 2/1/2020 may experience a Particulate Matter (PM) Sensor fault that can result in the MIL lamp illuminating. These faults may be P24DA, "PM Sensor Exhaust Sample Error," or P24D1, "PM Sensor Regen Incomplete." These faults may be caused by contamination of the PM sensor. In order to reduce the likelihood of sensor contamination, new exhaust pipe parts are being made available that contain an internal water management feature along with an integrated drain that will prevent contamination of the sensor. If either of these two faults occur, follow the instructions outlined in this bulletin to clean the exhaust pipes and install a new exhaust pipe with the new contamination prevention measures.

Required Parts – All Years

Inspect and replace the v-band clamp as needed

A new gasket will be needed when disconnecting the SCR exit.

Part Description	Part Number
SCR Gasket	21095726
V-band Clamp	21021850
Particulate Matter Sensor	23320447

Note: Customer adaptations can change required parts. Check for adaptations before ordering parts. (For example, under-slung exhaust)

Repair Procedure

Determine which Flex Pipe and Clamp the truck currently has installed on it. If the truck you are repairing has the Flex Pipe and Clamp shown in scenario 1, you will need to order the improved Flex Pipe (P/N 21142254) and Clamp (P/N 25172497). If the truck you are repairing has the Flex Pipe and Clamp shown in scenario 2 or 3, this truck already has the improved parts and ordering a new Flex Pipe and Clamp is NOT required.

	Scenario 1 This style Flex Pipe and Clamp will no longer work with the upper adjacent connecting pipe. The below parts in scenario 2 are required to perform this FSB. Follow the
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repair below
that is
applicable for
your
configuration.

Scenario 2

This style
Flex Pipe
and Clamp
only needs
the upper
adjacent pipe
replaced.
Reuse the
existing Flex
Pipe and
Clamp, or
order as
needed.

Flex Pipe –
21142254

Clamp –
25172497



Follow the repair below that is applicable for your configuration.

Scenario 3

This style Flex Pipe and Clamp only needs the upper adjacent pipe replaced. Reuse the existing Flex Pipe and Clamp, or order as needed.

Follow the repair below



that is
applicable for
your
configuration.

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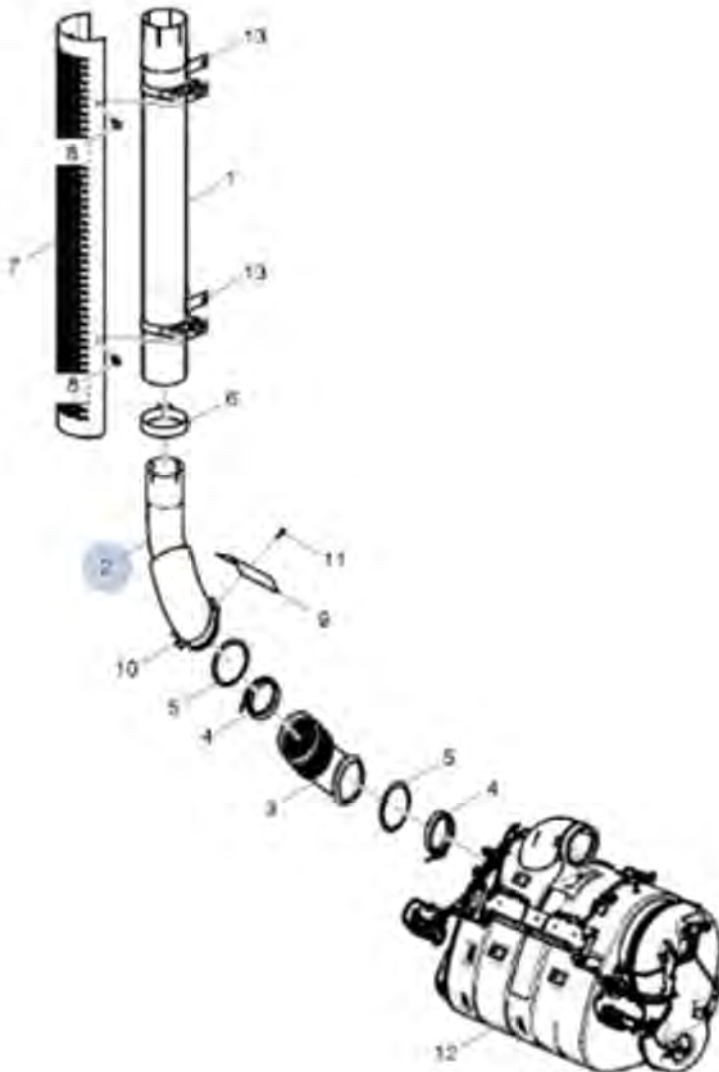
Model	Cab Type	Exhaust Configuration	Repair Number
VNL	Day Cab	Single Outlet Right Side Outboard	1
VHD Axle Fwd	Day Cab	Single Outlet Right Side Outboard	2
VNM, VHD Axle Bwd	Day Cab	Single Outlet Right Side Outboard	3
VHD Axle Bwd	Day Cab	Dual Outlet	4
VHD Axle Fwd	Day Cab	Dual Outlet	4
VNM, VHD, VNL	Sleeper Cabs	Single Outlet Right Side Outboard	5

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		Dual Outlet	
VNM, VHD, VNL	Sleeper Cabs	Single Outlet Right Side Outboard Dual Outlet	6

Repair 1

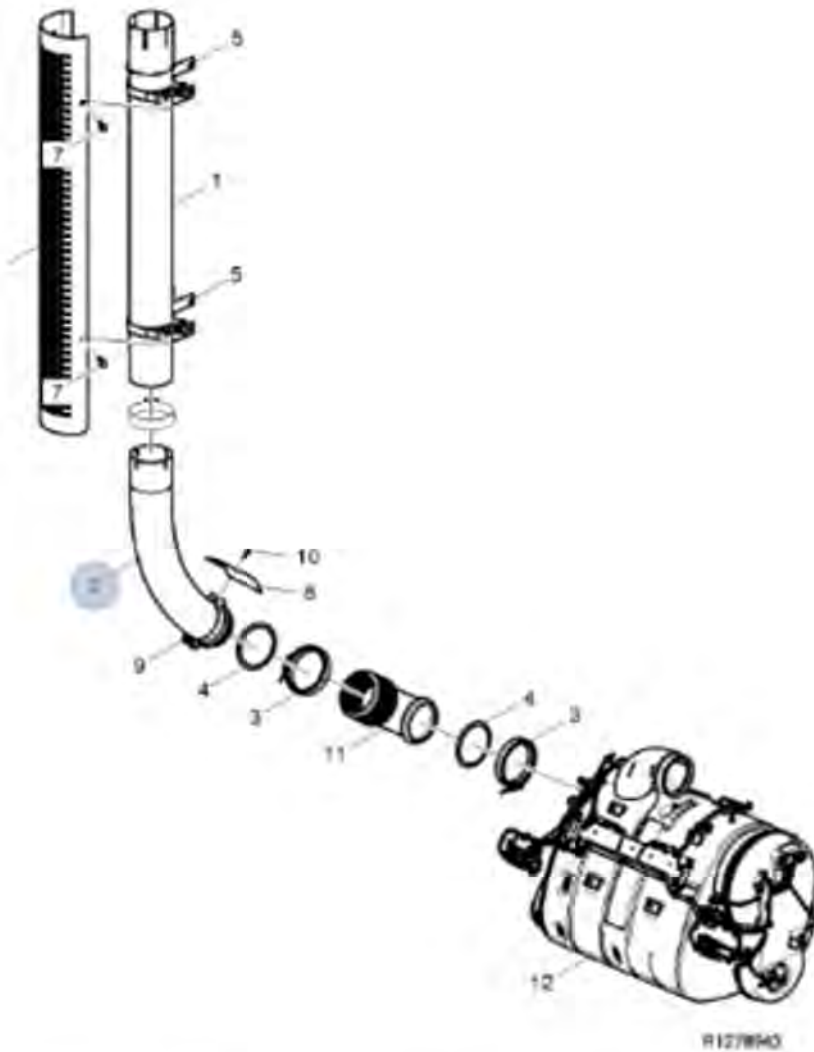


Model	Cab Type	Exhaust Configuration	Pipe 1 (Stack with welded flex)	Pipe 2 (SCR Elbow)	Clamp
VNL	Day Cab	Single Outlet Right Side Outboard	23985907	22181981	25172497

Repair 2

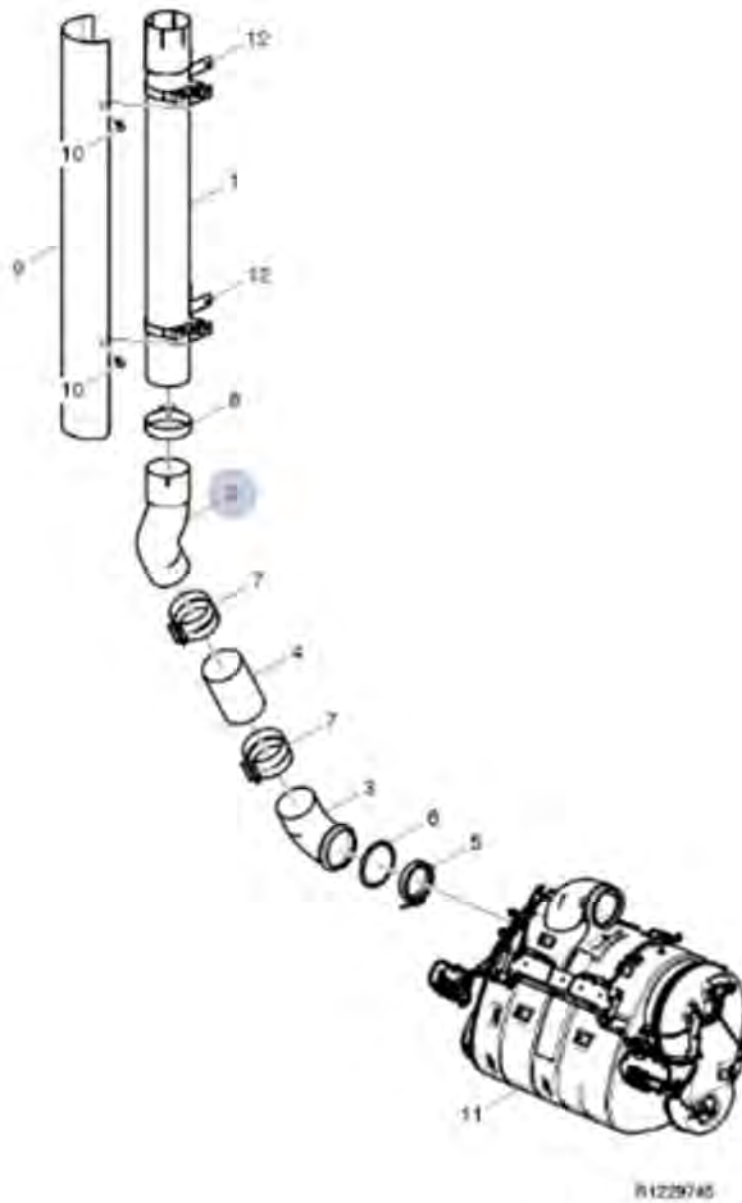
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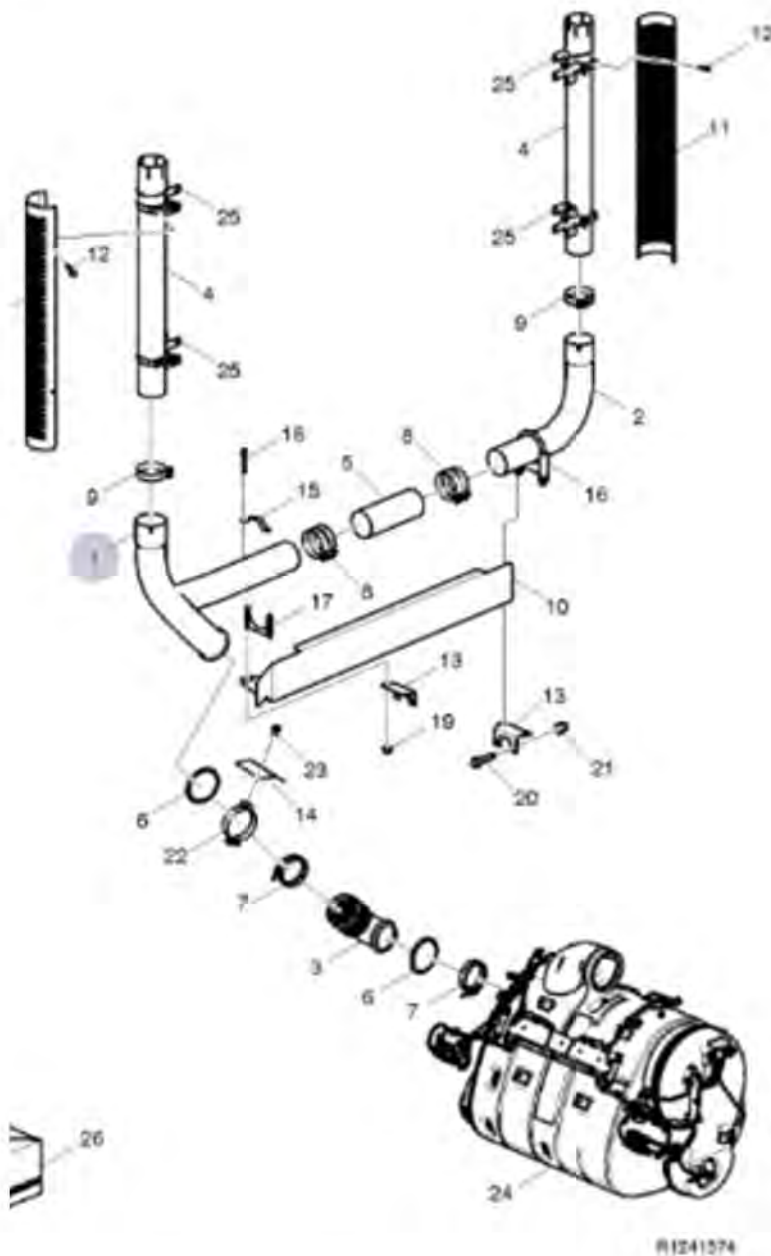
Model	Cab Type	Exhaust Configuration	Pipe 1
VHD – Axle Forward	Day Cab	Single Outlet Right Side Inboard	23155762

Repair 3



Model	Cab Type	Exhaust Configuration	Pipe 1
VNM/VHD	Day Cab	Single Outlet Right Side Inboard	23630048

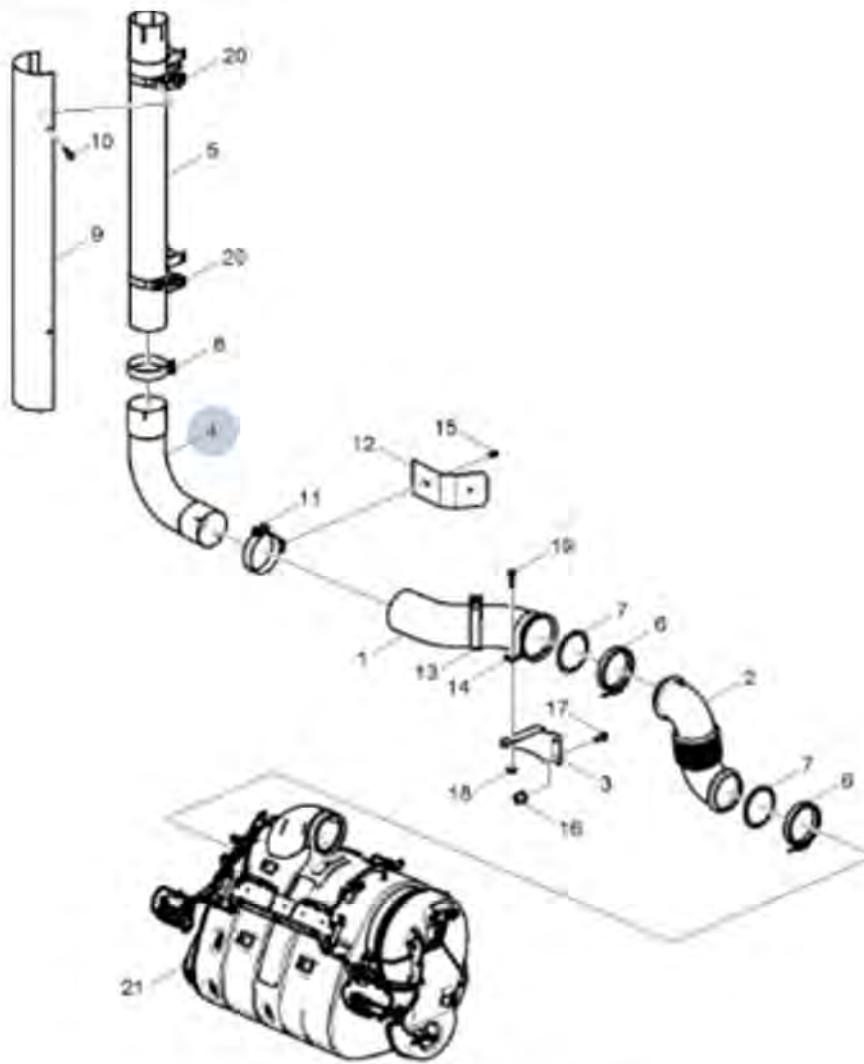
Repair 4



R1241574

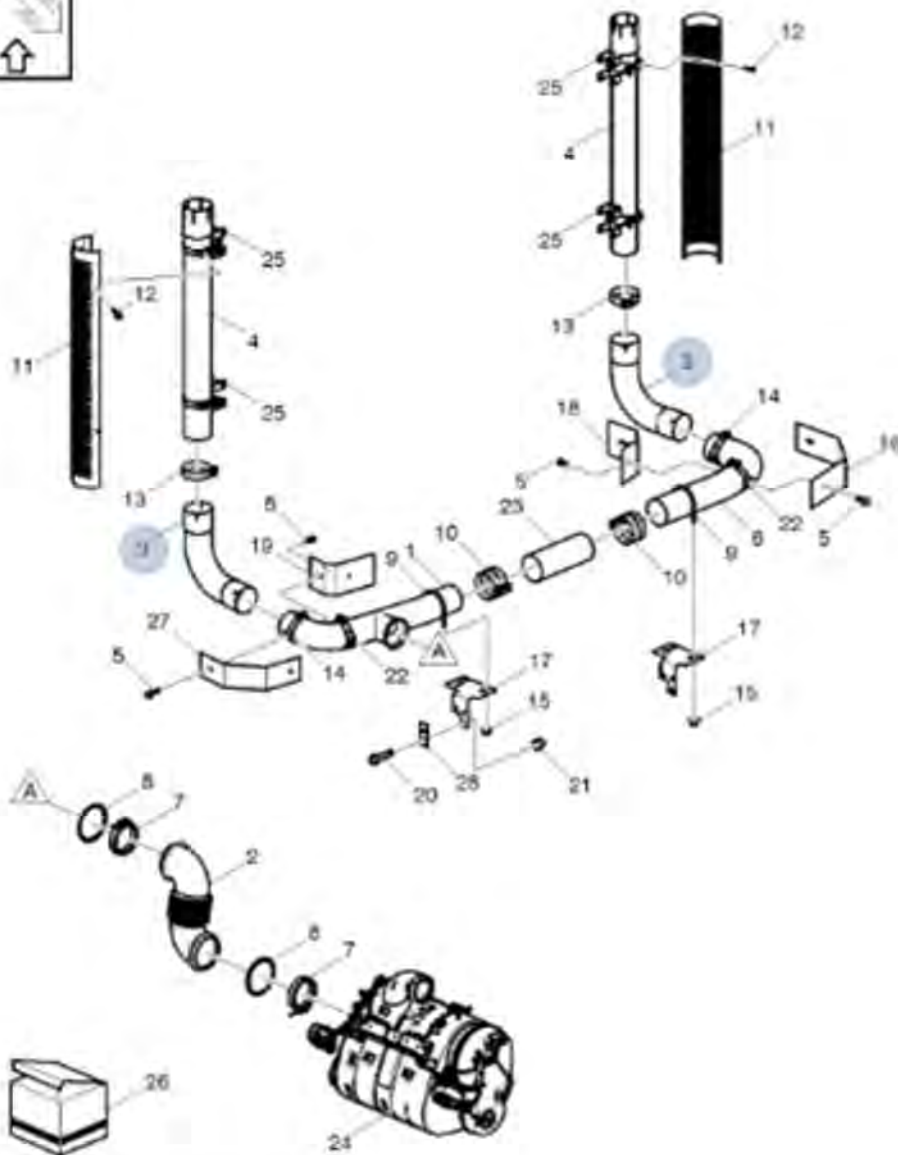
Model	Cab Type	Exhaust Configuration	Pipe 1
VHD Axle Bwd	Day Cab	Dual Outlet	23155774
VHD Axle Fd	Day Cab	Dual Outlet	23155785

Repair 5



Model	Cab Type	Exhaust Configuration	Pipe 1
VNM VHD VNL	Sleeper Cabs	Single Outlet Right Side Outboard	(Not Bright) 23154798 (Bright) 23154799

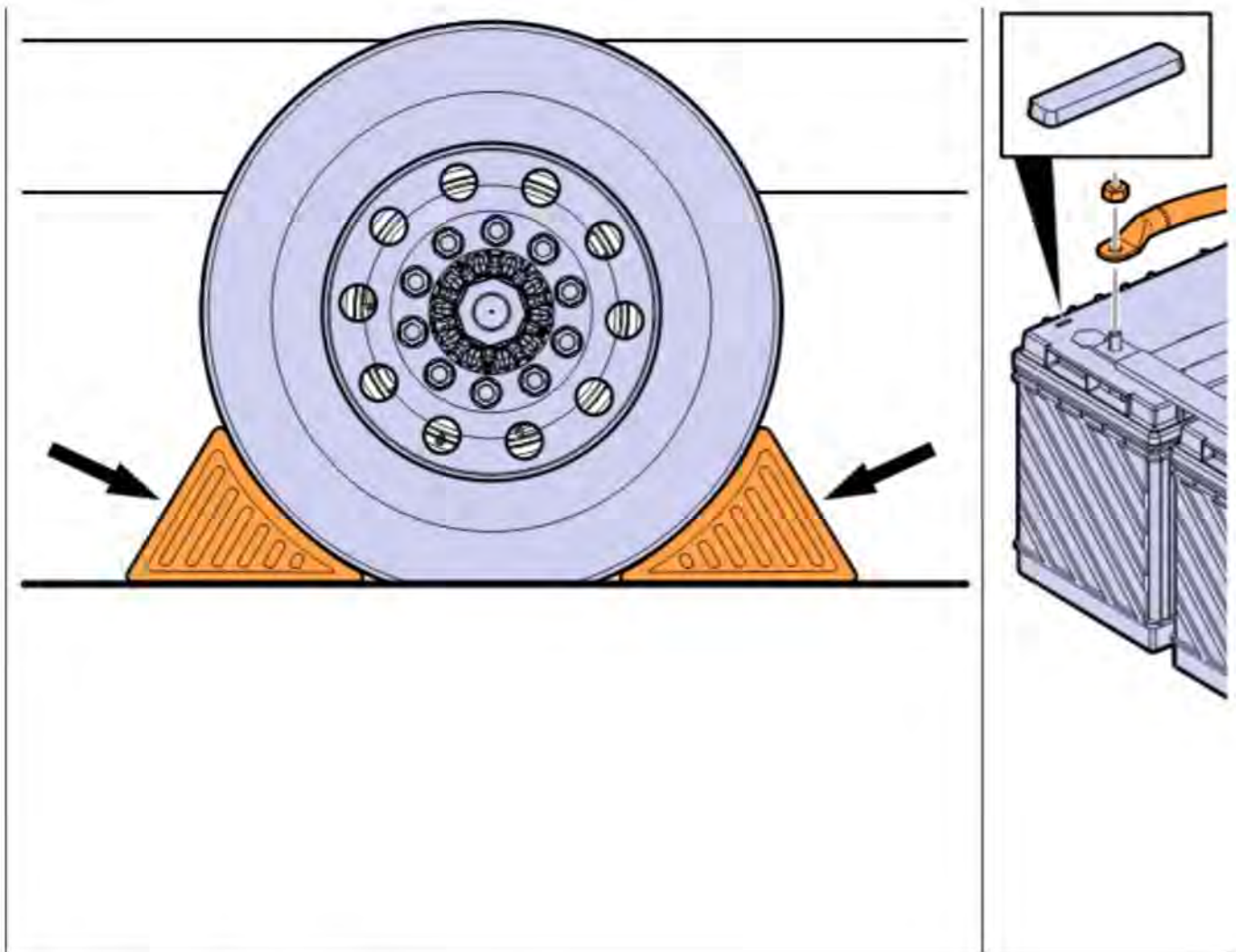
Repair 6



Model	Cab Type	Exhaust Configuration	Pipe 1	Note
VNM VHD VNL	Sleeper Cabs	Dual Outlet Right Side Outboard	(Not Bright) 23154798 (Bright) 23154799	Requires 2 elbows per chassis

Instructions

1. Decommission the vehicle. Install wheel chocks and disconnect the battery.



2. Remove the PM sensor and module.
3. Remove all exhaust pipes up to the SCR outlet pipe.
4. Pressure wash the inside of each pipe that will be reused.
5. Reassemble the exhaust system using the new parts referenced in the table above.
6. Mark the SCR outlet pipe 1.5" from the end also mark the new pipe (not flex) 1.5" from its inlet.
7. Slip the flex pipe as far over the SCR outlet pipe as possible.
8. Install the new exhaust pipe.
9. Using a new clamp assemble the new exhaust pipe to the new flex pipe using the 1.5" mark to get the correct amount of overlap.
10. Slide the assembly into place using the 1.5" mark on the SCR outlet as a reference point and to ensure the correct amount of overlap, once in both pipes are in place use clamps to secure.

Note: Correct installation is achieved when the flex pipe is in a "relaxed" state, there should be no compression or expansion visible on opposing sides of the pipe after installed.

11. Install the new PM sensor and module.

Note: Do not use any lubricant of any kind on the PM sensor threads.

Note: Align the tab on the sensor with the slot.

12. Torque the sensor to 35 +/- 5 Nm (26 +/- 4 Ft lb)

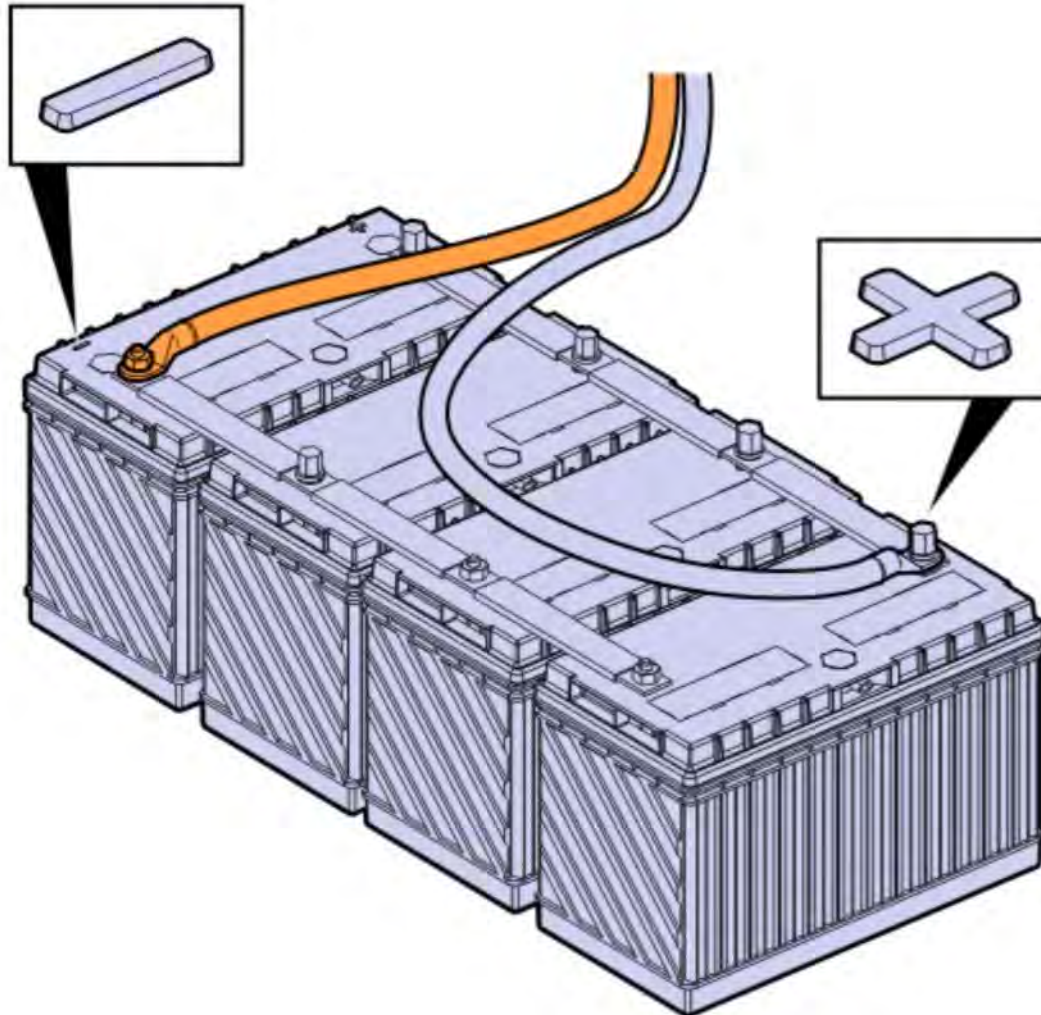
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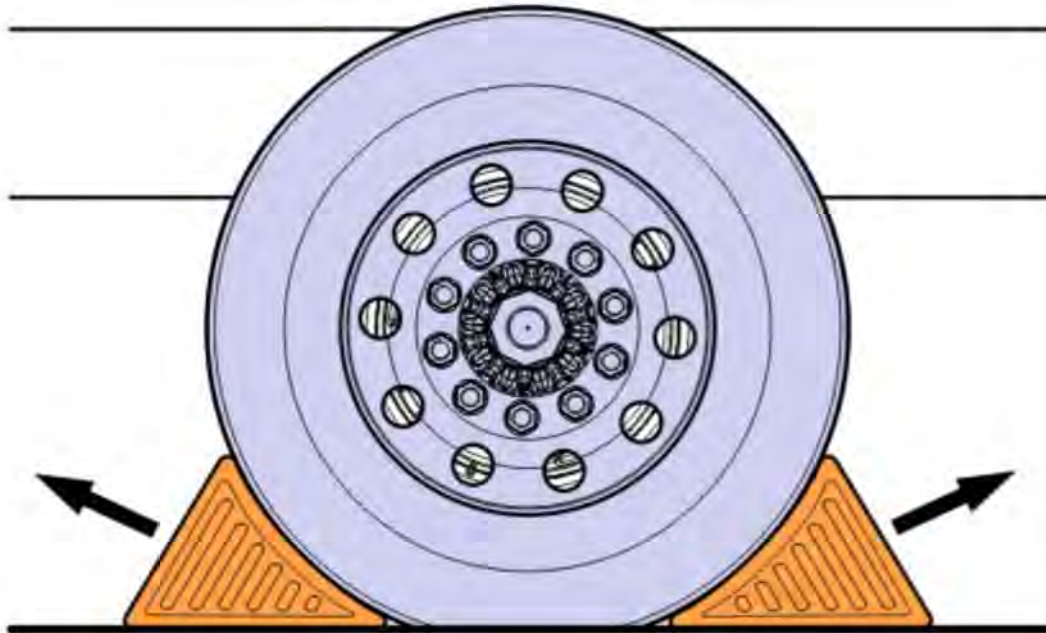
13. Install the sensor module.
14. Torque the nuts to
M6: 10 +/- 5 Nm (88 +/- 3 in lb)
M8: 24 +/- 4 Nm (17.1 +/- 3 ft lb)
15. Install the wire ties and clamps.

Note: Use high temperature cable ties.

16. Connect the battery.



17. Clear any DTC codes.
18. Remove the wheel chocks.



Reimbursement

This repair may be eligible for reimbursement if a product failure was experienced within time and mileage limits of the applicable Warranty coverage. Reimbursement is obtained via the normal claim handling process.	UCHP Reimbursement
Claim Type (used only when uploading from the Dealer Bus. Sys.)	W
Labor Code	
Primary Labor Code (Exhaust Particulate Sensor, Repair)	2846-16-09-02
Causal Part	22946032