

Subject: Engineering Information - Disconnected Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe, DTCs P249C, P20E8 Set

Attention: Proceed with this EI ONLY if the customer has commented about this concern AND the PIE number is listed in the Global Warranty Management / Investigate History link (GWM/IVH). If the customer has not commented about this condition or the EI does not show in GWM/IVH, disregard the PIE and proceed with diagnostics found in published service information. THIS IS NOT A RECALL refer to Service Bulletin 04-00-89-053 for more details on the use of Engineering Information bulletins.

This EI has been revised to add 2023 Model Year and RPO LM0. Please discard PIE0665A.

Brand:	Model:	Model Year:		VIN Breakpoint:		Engine:	Transmission :
		from	to	from	to		
Chevrolet	Silverado 1500	2020	2021	-	-	Equipped with 3.0L (RPO LM2)	-
	Silverado 1500 LTD (RPO J21, VIN Digit 5 = W / Y)	2022	2022				
	Silverado 1500 New (RPO J22, VIN Digit 5 = A / D)						
	Silverado 1500	2023	2023			Equipped with 3.0L (RPO LZ0)	
	Silverado 2500HD/3500HD	2020	2023			Equipped with 6.6L (RPO L5P)	
GMC	Sierra 1500	2020	2021			Equipped with 3.0L (RPO LM2)	
	Sierra 1500 Limited (RPO J21, VIN Digit 5 = 8 / 9)	2022	2022				
	Sierra 1500 New (RPO J22, VIN Digit 5 = H / U)						
	Sierra 1500	2023	2023			Equipped with 3.0L (RPO LZ0)	
	Sierra 2500HD/3500HD	2020	2023			Equipped with 6.6L (RPOs L5P)	

Involved Region or Country	North America
Condition	<p>Important: If the customer did not bring their vehicle in for this concern, DO NOT proceed with this EI. Customers may comment on Service Engine Soon (SES) lamp illuminated and/or "Service Emissions System" message on the Driver Information Center (DIC). Technicians may find the following DTCs set.</p> <ul style="list-style-type: none"> • DTC P249C - Excessive Time To Enter Closed Loop Reductant Injection Control • DTC P20E8 - Reductant Low Pressure <p>Note: If DTC P249C and/or P20E8 have set during the Tamper Service Bay Test, after installing a new Emission Reduction Fluid Pump/Tank, please refer to bulletin 20-NA-110.</p>

Cause	This condition may be related to a disconnected Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe.
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Correction

If you encounter a vehicle set with DTC P249C and/or P20E8 currently active (displaying the “Service Emission System” message and SES lamp illuminated) or in history (SES lamp illuminated or not illuminated), please proceed with the following steps:

1. Perform a Reductant System Leak Test. Does the test pass?
 - 1.1. If yes, contact the engineer listed below for the next steps.
 - 1.2. If no, is there a leak at the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe or at the connection to the Reductant Fluid Injector or the Emission Reduction Fluid Pump Outlet Port?

Note: Please submit a Field Product Report, capturing a picture of the DEF crystallization buildup at the connection interface. (Canadian dealers please send picture via email to chuck.o.wilkins@gm.com and please include the following information shown below if leaving a message).

- Technician name
- Dealer name and phone number
- Complete VIN and repair order (R.O) number
- Vehicle mileage

- 1.2.1. If no, contact the engineer listed below for the next steps.



- 1.2.2. If yes, is the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe or the connector damaged in any way, as shown in the pictures above.

1.2.3. If yes, replace the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe, perform a Reductant System Tamper Service Bay Test and release the vehicle back to the customer.

1.2.4. If no, follow the Cleaning Procedure outlined below and perform a Reductant System Tamper Service Bay Test, does the test pass?

1.2.5. If yes, release the vehicle back to the customer.

1.2.6. If no, contact the engineer listed below.

Cleaning Procedure



The Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe may be contaminated with crystallized DEF in or around the connector, as shown in the pictures above. This procedure outlines the correct cleaning procedure before attempting to re-connect the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe to the Reductant Fluid Injector or the Emission Reduction Fluid Pump Outlet Port.



Note: This procedure cannot be performed if the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe connector is contaminated with other forms of contaminants such as frame wax or dirt inside the connector, as shown in the pictures above. If this is the case, do not perform the cleaning procedure as the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe will need to be replaced.

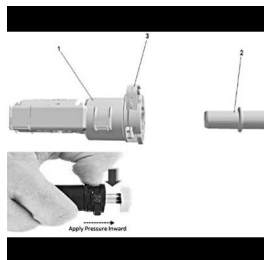
1. Fill a clean container with fresh DEF
2. Remove or pull back the heat protecting hood from the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe connector end if present
3. Fully disconnect the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe connector from the Reductant Fluid Injector or the Emission Reduction Fluid Pump Outlet Port by following the Removal Procedure outlined below (detach any clips or liners as needed for access). Wipe off any dust or dirt present on the outside of the connector.



Connector Submerged in DEF

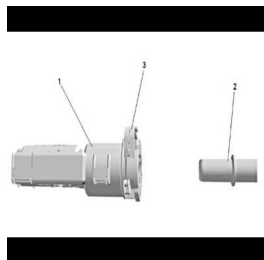
4. Submerge the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe connector end into the container filled with DEF, ensuring the open end of the connector is facing up, as shown in the picture above and hold for 1 min. Swash around the connector while it is submerged in DEF for another minute to dislodge any crystals embedded inside the connector.
5. Which side is the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe disconnected?
 - 5.1. Reductant Fluid Injector side: To clear any contamination within the connector interface command the Control Function: Reductant Pump at 50% duty cycle, while the connector is still in the container.
 - 5.2. Emission Reduction Fluid Pump Outlet Port side: Proceed to the next step.
6. Inspect the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe connector end for any remaining crystallization and repeat the steps above if needed.
7. With a clean rag, wipe off any crystallized DEF on the male pin of the Reductant Fluid Injector or the Emission Reduction Fluid Pump Outlet Port.
8. Re-connect the Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe connector to the Reductant Fluid Injector or the Emission Reduction Fluid Pump Outlet Port as per the Installation Procedure outlined below immediately to avoid re-crystallization. Re-install heat protecting hood if applicable.

Removal Procedure



Depress the tab (3) while pushing the female side (1) towards male connector (2) and pull female side (1) straight out to disconnect.

Installation Procedure



Push the Female Side (1) towards the male connector (2) all the way in, until an audible click is heard (if no audible click is heard, pull on the female connector (1) outward to ensure retention). Some connectors may have a locking tab that pops up, activate the locking tab by pressing down on the tab (3) (while keeping pressure towards the male connector (2)). Once latched, pull on the female connector (1) outward to ensure connection is made.

Contact Information

The Contact Information has been redacted.

Please include the following information if leaving a message:

- Technician name
- Dealer name and phone number
- Complete VIN and repair order (R.O) number
- Vehicle Mileage

On the repair order, document the date and time the call was placed (even if the engineer was not reached).

If engineering is unable to return the call within one hour, proceed with diagnosis and repair based on information found in SI.

Warranty Information

If engineer was contacted or required information was provided, use:

Labor Operation	Description	Labor Time
4088238*	Engineering Information - Disconnected Emission Reduction Fluid Exhaust Front Pipe Injector Supply Pipe, DTCs P249C, P20E8 Set	1.0 hr

Version	3
Modified	Released October 25, 2021 Revised June 02, 2022 – Revised to update information under the Correction. Revised September 02, 2022 – Revised to add 2023 Model Year and RPO LM0.