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| DTC (Code) P10CE-97 Codigo: | Bulletin: RD18-002 Date Fecha: June 13, 2018 |
| Description: | Reductant Return: No Flow Detected - Component or System Operation Obstructed or Blocked |
| Application: | US13 – US20 Emissions |

General Information

These repair instructions are intended to address the following fault(s):

| DTC | Description | Possible Cause | Possible (Observable) Symptoms |
|----------|------------------------------------|---|---------------------------------------|
| P10CE-97 | Reductant Return: No Flow Detected | <ul style="list-style-type: none"> • Restricted orifice in the aftertreatment fuel manifold • Damaged hoses and/or connections • Aftertreatment Diesel Exhaust Fluid (DEF) Pump • Blocked return line (damaged or frozen) | Aftertreatment DEF Pump Bleed Orifice |

Required Parts

| Part Number | Description | Quantity |
|-------------|--------------------------------------|----------|
| 21576178 | Diesel Exhaust Fluid (DEF) Pump Unit | 1 |

Repair Instructions

Aftertreatment Diesel Exhaust Fluid (DEF) Pump Unit, Replacement

Before replacing the DEF Pump Unit please check for damaged return hoses and connectors.

1. Disconnect and clean the aftertreatment DEF lines between the DEF tank and the DEF pump using water and compressed air. If the line is broken then it will have to be replaced.

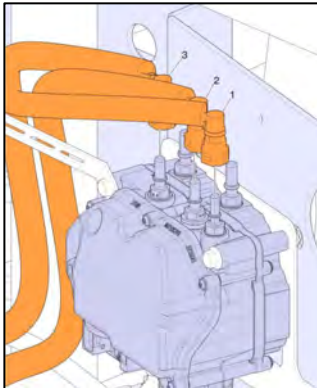


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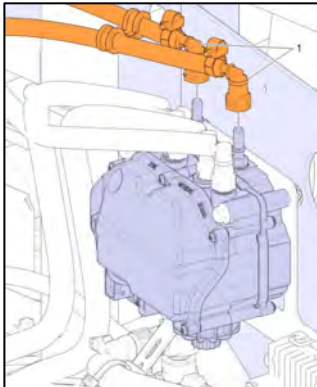
Removal

1. Apply parking brake and place shift lever in neutral.
2. Open rear engine service doors.
3. Remove all cables from ground (negative) battery terminals to prevent personal injury from electrical shock and prevent damage to electrical components.
4. Open right rear engine service door.
5. Connect the coolant extractor to the drain fitting at the bottom of the radiator and drain the coolant. Note: An alternate method is to connect the coolant drain hose to the drain fitting and drain the coolant into a suitable container. Special tools: 85112740, 9996049
6. Place a suitable container under the DEF tank to catch fluid that may drain from the pump. Note: Use protective equipment and an approved suitable container. Dispose of DEF according to local regulations.
7. Mark the DEF lines before removal. Remove the DEF inlet, backflow and outlet lines from the pump. Place protective caps on the DEF lines. *Note: For information on the handling of DEF, refer to "General Safety Practices", Group 20. Note: If inlet and backflow lines are switched, the system will not start.*



1. DEF Outlet Line
2. DEF Backflow Line
3. DEF Inlet Line

8. Remove the inlet and outlet coolant lines from the pump. Place protective caps on the coolant lines.



1. Coolant Lines

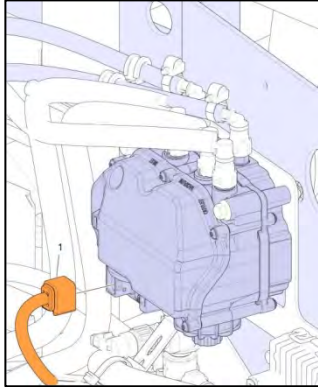
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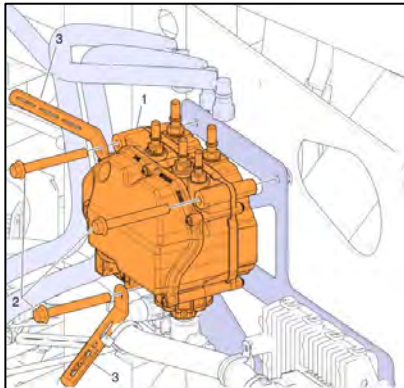
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9. Remove cable tie and disconnect the wiring harness connector from the DEF pump. Cover the wiring harness connector with a plastic bag to protect from possible damage from DEF.



10. Remove the fasteners, brackets and DEF pump from the mounting bracket.



1. DEF Pump
2. Fasteners
3. Brackets

Installation

1. Position the DEF pump onto the mounting bracket and install brackets and fasteners. Tighten the fasteners to specification, refer to Function Group 20, Specifications.
2. Remove plastic bag from the wiring harness connector. Attach the wiring harness connector to the DEF pump and secure the harness using a cable tie.
3. Install the inlet and outlet coolant lines onto the DEF pump.
4. Install DEF inlet, backflow and outlet lines onto the pump. Note: If inlet and backflow lines are switched, the system will not start.
5. Fill the cooling system with the recommended coolant using the coolant extractor. Ensure the coolant system is full. Special tools: 85112740
6. Install all previously removed cables to the ground (negative) battery terminals.
7. Connect Tech Tool to the vehicle. Use Guided Diagnostics to read and clear any diagnostic trouble codes (DTCs). Check for proper operation and for leaks.
8. Close right rear engine service door.
9. Close rear engine service doors.



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Additional Resources

These repairs are the most likely fix for the identified fault, if this does not fix the issue, Tech Tool will need to be used for more detailed diagnostics. If filing a warranty claim, please include the ASIST case number.

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|--------------------|----------|
| Labor Code | |
| 2589-03-02-36 | 1.2 |
| Causal Part | 21576178 |