<table>
<thead>
<tr>
<th>General Service Bulletin (GSB):</th>
<th>6.7L Diesel Exhaust Injector Fluid Cleaning</th>
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<tr>
<td><strong>GSB Overview:</strong></td>
<td>This bulletin provides information on a newly developed Integrated Diagnostic System (IDS) routine to clean Diesel Exhaust Fluid (DEF) Injectors and restore proper function of the Selective Catalytic Reduction System (SCR) without removing the injector.</td>
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<td><strong>NOTE:</strong> This information is not intended to replace or supersede any warranty, parts and service policy, Work Shop Manual (WSM) procedures, PC/ED procedures or technical training or wiring diagram information.</td>
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A new function has been added to the IDS tool to clean diesel exhaust fluid (DEF) injectors on 2011-2016 6.7L Superdutys. Without removing the injector from the exhaust system, the tool automatically cleans crystalized DEF that forms inside the injector preventing proper function of the Selective Catalytic Reduction (SCR) system.
Potential Crystallization Points Inside Injector

- Highest potential for sticking injector:
  - Large surface area along the armature to injector body where movement occurs.
  - Crystal formation between the end of the needle and the body would result in the crystal having to be compressed to open the injector.

- Lower potential to stick the injector:
  - Crystals could possibly form between the needle and saddle, however the small surface area of sealing would mean the crystals would be quite weak.
Examples of DEF crystal formation on injector tip and exterior
## Important IDS Tool Information

**SCR DEF Injector Cleaner**

This tool is used to clear a clogged DEF injector. Use it when directed by service diagnostics. All DEF injector circuit DTCs must be corrected and cleared before running this tool.

The DEF temperature must be above the freezing point of DEF and the exhaust must be at normal operating temperature. The tool will raise the idle to warm the powertrain. It may be necessary to drive the vehicle to warm the powertrain before running this tool.

IDS will command an elevated RPM throughout the cleaning procedure. Run this tool with the vehicle outside, in an open area.

The injector cleaning process may repeat up to four times and take 5-25 minutes, depending on the exhaust temperature and severity of the clogging.

Do you wish to continue?

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
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Frozen DEF Message

The tool will check for a frozen DEF tank and display this message if the DEF is frozen.

The diesel exhaust fluid tank is frozen. Drive or run the truck to heat the DEF. The time to thaw the tank will vary, depending on the amount of frozen material in the tank.

Automated warmup to injector cleaning temperature
6.7L Diesel Exhaust Fluid Injector Cleaning

Establishing correct dosing pressure

<table>
<thead>
<tr>
<th>REDUCT_TNK_P</th>
<th>REDUCT_PMP_DC</th>
<th>REDUCT_INJ_DC</th>
<th>EGT12</th>
</tr>
</thead>
<tbody>
<tr>
<td>73.08psi</td>
<td>14.1%</td>
<td>0%</td>
<td>393.8°F</td>
</tr>
</tbody>
</table>

The tool is cleaning the DEF injector. This process will take several minutes until normal injector flow is established or the injector diagnosis is complete.

If the exhaust temperature falls below the required minimum, the tool will automatically return to the warmup screen.
System Pressurization and Injector Pulsing

The tool is cleaning the DEF injector. This process will take several minutes until normal injector flow is established or the injector diagnosis is complete.

If the exhaust temperature falls below the required minimum, the tool will automatically return to the warmup screen.

Stop

This graphic shows how the REDUCT_PMP_DC PID percentage relates to DEF injector flow.
Waiting for correct temperature

| EGT12 | 234°C |

Cool down phase: EGT12 < 197°C

Reversing Flow with Maximum Injector Duty Cycle

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<tr>
<td>0KPa</td>
<td>40%</td>
<td>99.6%</td>
<td>175°C</td>
</tr>
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</table>

Wait 60-120 seconds while the reductant line is emptied.
Next Cleaning Phase Message

If needed, the tool will repeat warmup and start another phase of the cleaning process. Press the tick to continue.

The DEF injector flow is fully restored. Complete the repair as instructed in the service manual.
Successful Injector Cleaning Message

The **DEF** injector flow is fully restored. Complete the repair as instructed in the service manual.
Unsuccessful Injector Cleaning Message

The **DEF** injector flow is fully restored. Complete the repair as instructed in the service manual.