

RA: Catalyst System

NOTICE: Only use ultra low sulfur diesel fuel that is 20% or less biodiesel with this vehicle. Use of any other fuel type may damage the vehicle or cause an emission concern. Refer to the Owner's Literature for additional information.

Note: Regeneration may occur during normal operation. During regeneration, diagnostic procedures may display biased values. If a regeneration occurs during diagnostic procedures, allow the process to complete before continuing diagnostics.

This pinpoint test is intended to diagnose the following:

- catalyst system
- oil consumption
- fuel quality
- reductant quality

RA1 PRELIMINARY DIAGNOSIS FOR DIAGNOSTIC TROUBLE CODE (DTC) P0420 OR P20EE
Are DTCs P0420, P20EE or P24FE present?

Yes	GO to RA2 .
No	Unable to duplicate the condition. CHECK for a loose connection, and damaged or corroded terminals. WIGGLE the harness attempting to recreate the concern. REPAIR as necessary. RETURN to Section 3, Symptom Charts for further direction.

RA2 CHECK FOR OTHER DTCS

- Check for self-test DTCs.

Are any other DTCs present?

Yes	DISREGARD the current diagnostic trouble code (DTC) at this time. DIAGNOSE the next DTC. GO to Section 4, Diagnostic Trouble Code (DTC) Charts and Descriptions .
No	GO to RA3 .

RA3 CHECK FOR LEAKS IN THE EXHAUST SYSTEM

- Visually inspect the fuel vaporizer system for leaks or a plugged fuel vaporizer glow plug.
- Visually inspect the oxidation catalytic converter (OC) and the exhaust gas temperature (EGT) sensors for the following:
 - correct connection at the exhaust tube fittings
 - correct connection at the sensors exhaust ports
 - leaks, cracks, or punctures

Is a concern present?

Yes	REPAIR as necessary. Clear the PCM DTCs. REPEAT the self-test.
No	For Transit with DTC P0420, GO to Pinpoint Test RL . For all others, GO to RA4 .

RA4 CHECK THE FUEL AND REDUCTANT QUALITY

- Verify the fuel level, grade, and quality is sufficient to support normal operation of the engine. Refer to Section 4, [Diagnostic Procedures](#) and carry out the Sufficient Clean Fuel Test.

- Check with the customer to verify the use of ultra low sulfur diesel fuel.
- Check the reductant fluid level and quality. Refer to Section 1, [Engine Control Components](#), Selective Catalytic Reduction (SCR) Catalyst for additional information.

Is a concern present?

Yes	REPAIR as necessary. ADVISE the customer of the correct fuel type required for this vehicle. Clear the PCM DTCs. REPEAT the self-test.
No	GO to RA5 .

RA5 IDENTIFY THE CUSTOMER'S DRIVING HABITS

Note: Some vehicle operating conditions may cause a high temperature condition before the OC. This condition limits the amount of temperature increase that occurs across the OC and may cause the DTC to set.

- Ignition OFF.
- Check with the customer for the following conditions:
 - excessive trailer weight
 - steep uphill grade operation
 - high engine load operation
 - high ambient temperature operation

Is the vehicle consistently operated under high load or high temperature conditions?

Yes	ADVISE the customer of the conditions that may cause the DTC. Clear the PCM DTCs. REPEAT the self-test.
No	GO to RA6 .

RA6 CHECK FOR EXCESSIVE ENGINE OIL CONSUMPTION

- Carry out the oil consumption test. For additional information on excessive engine oil consumption. Refer to the Workshop Manual Section 303-00, Engine System - General Information , Excessive Engine Oil Consumption.

Is a concern present?

Yes	REPAIR as necessary. Clear the PCM DTCs. REPEAT the self-test.
No	INSTALL a new OC. REFER to the Workshop Manual Section 309-00, Exhaust System. For F-Series Super Duty, CARRY OUT the diesel particulate filter manual regeneration with the scan tool. REFER to Section 2, Scan Tool Setup and Functionality. CARRY OUT the Diesel Particulate Regeneration System DPF Parameter Reset function on the scan tool. REFER to Section 2, Resetting The Diesel Particulate Filter Parameter. CARRY OUT the Reset And Clear The Specified Function Oxidation Catalyst and the Initialize Selective Catalytic Reductant SCR Learning on the scan tool. REFER to Section 2, Clear The Continuous Diagnostic Trouble Codes (DTCs) And Reset The Emission Monitors Information in The Powertrain Control Module (PCM). CARRY OUT the Drive Cycle Procedure. REFER to Section 2, Drive Cycles. For all others, CARRY OUT the diesel particulate filter manual regeneration with the scan tool. REFER to Section 2, Scan Tool Setup and Functionality. CARRY OUT the Diesel Particulate Regeneration System DPF Parameter Reset function on the scan tool. REFER to Section 2, Resetting The Diesel Particulate Filter Parameter. CARRY OUT the Reset And Clear The Specified Function Oxidation Catalyst and the SCR System SCR Parameter Reset on the scan tool. REFER to Section 2, Clear The Continuous Diagnostic Trouble Codes (DTCs) And Reset The Emission Monitors Information in The Powertrain Control Module (PCM). CARRY OUT the Drive Cycle Procedure. REFER to Section 2, Drive Cycles. Clear the PCM DTCs. REPEAT the self-test.

mcx30.com