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Case Number: S2118000015 REV. B

Release Date: March 2022

Symptom/Vehicle Issue: Malfunction Indicator Lamp (MIL) Illumination. Diagnostic Trouble Code (DTC) P0403 – EGR Control Circuit Open, Set.

Discussion: Reports have been received from the field of EGR valves being replaced for DTC P0403 on lower mileage vehicles. An analysis of the returned parts has found that all were no trouble found (NTF). Further analysis indicates that the DTC may have set falsely due to slightly higher resistance caused by the internal brushes in the new EGR valve motor not being fully seated yet. This is not caused by an internal defect in the EGR valve. As the EGR valve operates, the brushes will set in, lowering the internal resistance. If you receive a vehicle in with this DTC, please perform the following repair procedure based on your scenario.

Repair Procedure:

Scenario #1: MIL Illuminated, P0403 Set Stored. Additional PCM DTCs Active.

If the vehicle has P0403 set in stored status along with other PCM active DTCs or drivability symptoms, diagnose and repair those DTCs/Conditions first before diagnosing P0403. Once repaired, attempt to duplicate the P0403 by doing the following.

- Clear all DTCs and turn off the ignition for a minimum of 5 minutes. Restart the vehicle. Did P0403 reset?
 - a. Yes >>>. Continue with normal published diagnostics for the DTC.
 - b. No >>>. Perform the EGR Motor Sweep Routine below to ensure the motor brushes have fully seated to prevent false failure of P0403.

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

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Scenario #2: MIL Illuminated, P0403 is the only DTC and is set active.

If the vehicle is in with a MIL complaint and DTC P0403 is the only active code, proceed with normal published diagnostics for the DTC. Closely inspect all connections for loose, damaged, or pushed out pins and repair as necessary.

Scenario #3: MIL Illuminated condition, P0403 is the only DTC but is currently stored.

If the vehicle is in with a MIL complaint and DTC P0403 is the only code set but is stored, perform the following:

- Clear the DTC and allow the vehicle to sit overnight.
- Start the vehicle and see if P0403 returned. Did the P0403 reset?
 - a. Yes >>> Proceed with normal published diagnostics for P0403, and repair as necessary.
 - b. No >>> Perform the EGR Motor Sweep Routine below to ensure the motor brushes have fully seated to prevent false failure of P0403.

EGR Motor Sweep Routine:

1. Turn the ignition on, engine off
2. Using wiTECH, navigate to the PCM “Actuators” tab, and initiate the “EGR DC Motor Solenoid Valve/Recirculation Valve” routine. Please see ([Figure 1.](#)).

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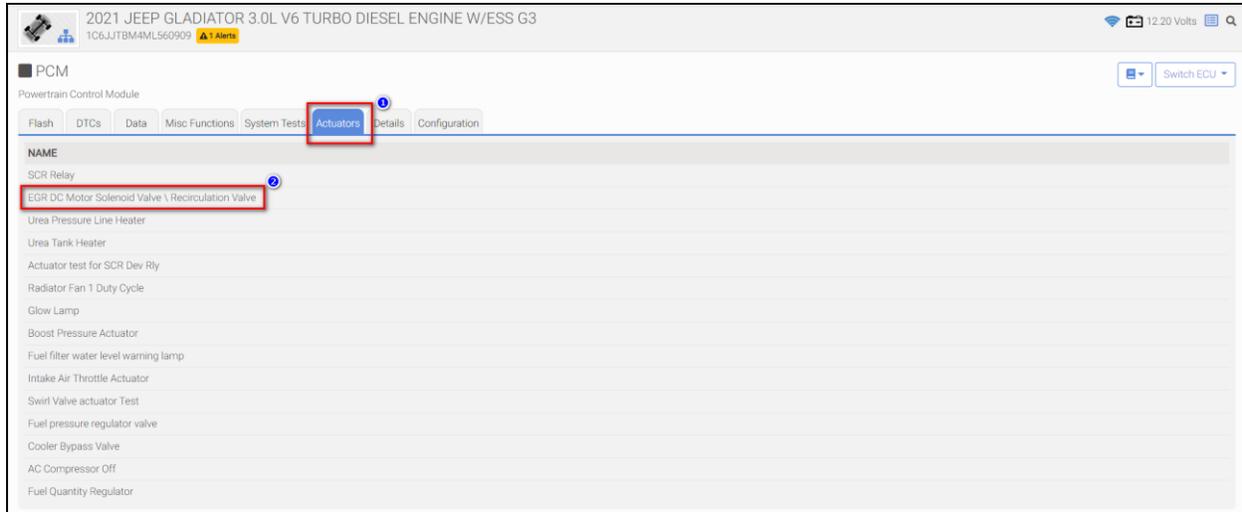


Figure 1.

- From the available drop-down menu, select 100% and click “Start” to command the EGR valve to 100%. Please see (Figure 2).

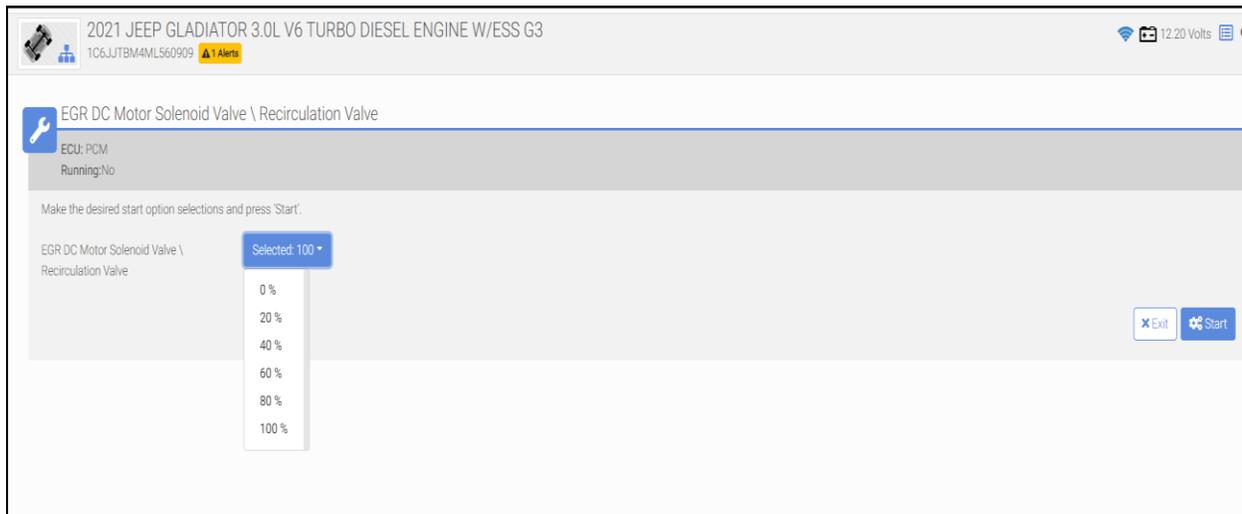


Figure 2.

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4. Wait 2-5 seconds and click “Stop”
5. Repeat steps 3 and 4, for a total of 5 times.
6. Perform the above sequence for the remaining selectable positions (0%, 20%, 40%, 60%, and 80%).

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