

DTC B3935 Transponder Authentication Error

Diagnostic Instructions

- Perform the Diagnostic System Check – Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

DTC Descriptor

DTC B3935 57: Transponder Authentication Error

Circuit/System Description

When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the transponder embedded in the head of the key is energized by the exciter coils surrounding the ignition lock cylinder. The energized transponder transmits a signal that contains its unique value, which is received by the theft deterrent module (TDM). The TDM then compares this value to a value stored in memory. This stored value is the learned key code. If the value is correct, the TDM will send the prerelease password via the serial data circuit to the engine control module (ECM). If the transponder value does not match the learned key code or a transponder value is not received, the TDM will send the start disable password to the ECM.

Conditions for Running the DTC

- Ignition is in the Accessory or Run position.
- A valid transponder value has been read.

Conditions for Setting the DTC

- The transponder value is valid and matches the value stored in the TDM memory.
- The transponder calculation to the challenge from the TDM does not match the TDM calculation.

Action Taken When the DTC Sets

- Vehicle starting will be disabled.
- The security indicator will be illuminated.

Conditions for Clearing the DTC

- A current DTC will be cleared when a valid transponder value has been read and authenticated.
- A history DTC will be cleared after 100 malfunction-free ignition cycles or when a scan tool is used to clear DTCs.

Reference Information

Schematic Reference

Immobilizer Schematics

Connector End View Reference

Component Connector End Views

Description and Operation

Immobilizer Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Replace the suspected inoperative or malfunctioning key. DTC B3935 should not reset and the vehicle should start. If the replacement key results in the resetting of DTC B3935, replace the TDM.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the diagnostic procedure.

- Replacing Keys (North America except Canada) or Replacing Keys (Canada)
- Control Module References for theft deterrent module replacement, setup, and programming

LAUNCH