P0814: TRANSMISSION RANGE DISPLAY CIRCUIT

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	**$200-$350**
Can I Still Drive?	:	No

What Does The P0814 Code Mean?

If your vehicle has stored a code P0814, it means that the powertrain control module (PCM) has detected a malfunction in the transmission range display circuit. This type of code is limited to vehicles with automatic transmissions.

The transmission control module (TCM) may be a stand alone module or part of the PCM. The transmission range display sensor is often integrated into the neutral safety switch.

The transmission range display sensor is actuated by the shift shaft and provides a voltage signal to the PCM and the instrument panel control module (IPCM) which reflects the specific gear that has been selected.

Various engine and transmission outputs are monitored by the PCM to determine whether the transmission range display sensor is in the appropriate position. Additionally, the PCM monitors transmission range sensor circuit voltage to ensure that is within established parameters.

If the PCM detects that the vehicle is moving in a fashion which is not conducive to the gear selection input by the transmission range display sensor or if circuit voltage is not within allowable parameters, a code P0814 may be stored and a malfunction indicator lamp (MIL) illuminated. Multiple ignition cycles (with a failure) may be required for MIL illumination.

What Are The Symptoms Of The P0814 Code?

Symptoms of a P0814 trouble code may include:

- Shift indicator (on dash or console) is inoperative
- Shift indicator reflects incorrect gear
- No start or engine will start with transmission in gear
- No symptoms may be exhibited

What Are The Potential Causes Of The P0814 Code?

Causes for this code may include:

- Defective transmission range display sensor
- Shorted or open circuits in transmission range display sensor circuit
- Broken or defective shift indicator
- Faulty PCM or a programming error

How Can You Fix The P0814 Code?

A diagnostic scanner, a digital volt/ohmmeter (DVOM), and a source of vehicle specific diagnostic information will be required to diagnose a code P0814.

You may use your source of vehicle information to locate a technical service bulletin (TSB) that matches the vehicle year, make, and model; as well as the engine size, code/s stored, and symptoms exhibited. If you find one, it could yield helpful diagnostic information.

Use the scanner (connected to the vehicle diagnostic connector) to retrieve all stored codes and pertinent freeze frame data. It is a good idea to write this information down before clearing the codes then test-drive the vehicle until the PCM either enters readiness mode or the code is reset.

If the PCM enters readiness mode at this time, the code is intermittent and may be much more difficult to diagnose. If this is the case, the conditions which contributed to the code being stored may need to worsen before an accurate diagnosis can be made.

If the code is immediately reset, the next step of your diagnosis will require that you search your vehicle information source for diagnostic flow-charts, connector pin-out charts, connector face views, and component testing procedures/specifications.

Step 1

Use the DVOM to test voltage, ground, and signal output at the transmission range display sensor or neutral safety switch. Transmission range display sensor input and output circuits typically consist of either reference voltage (transmission in gear) or ground (transmission in park or

neutral).

Step 2

If system circuits are functional, use the DVOM to test the transmission range display sensor. Replace sensors that do not test within system specifications.

- Transmission range display sensor codes are most often attributed to sensor failure

Severity Description

A stored code P0814 indicates that either a serious electrical issue or some type of mechanical failure has occurred. At any rate, conditions which contributed to a code of this nature being stored should be rectified as quickly as possible.

Reference Sources

P0814 Transmission Range Display Circuit, OBD-Codes.