P0655: ENGINE HOT LAMP OUTPUT CONTROL CIRCUIT MALFUNCTION

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	**$200-$400**
Can I Still Drive?	:	**Yes**

What Does The P0655 Code Mean?

A stored code P0655 means that the powertrain control module (PCM), or one of the other related controllers, has detected a discrepancy in the engine hot lamp output control circuit.

The engine hot lamp is designed to provide the driver with a visual warning lamp when the engine is overheating. The engine hot lamp is integral to the instrument panel. The PCM receives a signal from the engine coolant temperature sensor. This signal allows the PCM to monitor engine coolant temperature whenever the engine is running or the ignition switch is in the ON position.

This data is used primarily for calculating engine fuel delivery and ignition timing strategy and then output to the engine hot lamp and/or instrument panel controller. It may also be output to other controllers. For instance, the engine hot lamp control circuit may be output to the climate control module so that the air conditioning compressor can be disabled if the engine overheats.

If a problem is detected in monitoring the engine hot lamp output control circuit, a code P0655 will be stored and a malfunction indicator lamp (MIL) may be illuminated.

What Are The Symptoms Of The P0655 Code?

Symptoms of a P0655 trouble code may include:

- Engine drivability issues
- Inoperative engine hot lamp
- Engine hot lamp is illuminated constantly

What Are The Potential Causes Of The P0655 Code?

Causes for this code may include:

- Open or shorted circuit between the PCM and the instrument panel or other controllers
- PCM programming error
- Faulty controller or PCM

How Can You Fix The P0655 Code?

If there are engine overtemp codes or engine temperature sensor codes present; diagnose and repair those before attempting to diagnose a stored P0655.

Make sure that the engine is filled with the appropriate coolant and not overheating.

Consult your vehicle information source for technical service bulletins (TSB) that replicate the code stored, vehicle (year, make, model, and engine), and symptoms exhibited. If you find the appropriate TSB, it may yield helpful diagnostic information.

A diagnostic scanner and a digital volt/ohmmeter will be necessary to accurately diagnose a code P0655. A reliable source of vehicle information will also be required.

Step-by-step Guide

Begin by connecting the scanner to the vehicle diagnostic port and retrieving all stored codes and freeze frame data. You will want to write this information down, just in case the code proves to be an intermittent one.

After recording all pertinent information, clear the codes and test drive the vehicle (if possible) until the code is reset or the PCM enters readiness mode.

If the PCM enters readiness mode, the code is intermittent and will be even more difficult to diagnose. The condition, which caused the P0655 to be stored, may need to worsen before an accurate diagnosis can be reached. On the other hand, if the code fails to reset and there are no drivability symptoms exhibited, the vehicle can be operated normally.

If the P0655 is immediately reset, proceed with a visual inspection of system related wiring and connectors. Harnesses that have been broken of unplugged should be repaired or replaced as required.

If wiring and connectors appear functional, use your source of vehicle information to obtain the appropriate wiring diagrams, connector face views, connector pin-out charts, and diagnostic flow charts.

Once you have the correct information, use your DVOM to test the engine hot lamp output circuit at the appropriate pin of the PCM connector. If no engine hot lamp output signal is discovered, suspect that the PCM is defective or there is a PCM programming error.

If an engine hot lamp output signal is discovered at the PCM connector, test the corresponding circuit (as it is presented) at the engine hot lamp pin of the instrument panel connector. If the engine hot lamp signal is not discovered, you have an open circuit between the PCM and the hot lamp in the instrument panel. Repair or replace the circuit and retest.

Note: If a code P0655 is stored and the engine hot lamp is operational, suspect a defective PCM or a PCM programming error

Severity Description

A P0655 should be categorized as severe because it could result in numerous drivability issues as well as fail to warn the driver in the event of engine overheating.

Reference Sources

Diagnostic Trouble Code (DTC) Guide for P0655 - Ominitek Advanced Technologies, page 130.