

P0602: CONTROL MODULE PROGRAMMING ERROR

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Advanced
Repair Cost	:	\$300-\$900
Can I Still Drive?	:	No

What Does The P0602 Code Mean?

If your OBD II equipped vehicle has stored a code P0602, it means that the powertrain control module (PCM) has detected an internal programming error. The programming error applies to the PCM itself.

When you look at a PCM, you may only see a metal box but it is what's inside that is essential to efficient engine operation. Information that is vital to engine management is programmed from the factory using the electronically erasable programmable read only memory (EEPROM).

Vehicle specific settings for engine and transmission management are programmed into the EEPROM for each vehicle that leaves the factory. The EEPROM not only helps to manage engine efficiency and performance but also serves to recognize and interact with other onboard vehicle control modules.

If the PCM detects inconsistencies with the EEPROM, or if it fails to recognize the program of the EEPROM, a code P0602 will be stored and a malfunction indicator lamp (MIL) may be illuminated. Depending upon the severity of the malfunction, multiple ignition cycles (with a malfunction) may be necessary for MIL illumination.

Other internal control module error trouble codes include:

- [P0601](#): Internal Control Module Memory Check Sum Error
- [P0603](#): Internal Control Module Keep Alive Memory (KAM) Error

- [P0604](#): Internal Control Module Random Access Memory (RAM) Error
- [P0605](#): Internal Control Module Read Only Memory (ROM) Error

What Are The Symptoms Of The P0602 Code?

Symptoms of a P0602 code may include:

- No start condition
- Multiple drivability issues
- Harsh or erratic automatic transmission shifting
- Diminished fuel efficiency
- The engine may stall or idle roughly

What Are The Potential Causes Of The P0602 Code?

Possible causes for this code include:

- PCM programming error
- New or incorrect PCM
- Aftermarket (high-performance) PCM program installed
- Blown ECM/PCM fuse
- Bad ECM/PCM power supply relay
- A defective ECM/PCM
- Open or shorted wiring or connectors in the CAN harness
- Insecure control module ground strap or broken ground wire

How Can You Fix The P0602 Code?

Diagnosing a code P0602 can be challenging, even to the most experienced and well equipped technician. Nevertheless, there are a few preliminary tests that can be performed before throwing your hands in the air and passing the problem off to someone else.

As usual, I would begin my diagnosis with a visual inspection of engine management wiring harnesses and connectors. Any wiring and connectors that have been damaged or burned should be repaired or replaced. Next, I would connect the scanner to the vehicle diagnostic connector and retrieve all stored codes and freeze frame data. Before clearing the codes, I would write them down just in case this proves to be an intermittent code.

A code P0602 must be diagnosed and repaired before diagnosing and repairing any other stored codes, as other stored codes are likely to be false. Now clear the codes in the hope that the P0602 has been stored in error.

If the P0602 is immediately reset, check for battery voltage to the PCM. The PCM requires battery

voltage to function properly. If the battery terminals are corroded or loose, there may be inadequate voltage reaching the PCM. Check PCM relays and fuses for battery voltage with the circuit loaded. Corroded fuses may appear normal until a load is applied to the circuit and their deficiency is revealed.

Obviously, if the PCM has been recently replaced, the likelihood that it was improperly programmed or not programmed at all is great.

Also, a controller from another vehicle cannot be used unless it has been reprogrammed specifically for the vehicle in question and aftermarket (high-performance) programmers may not be recognized by other controllers (especially at first), causing a P0602 to be stored.

Incorrectly programmed or replaced controllers may be reprogrammed with a factory scanner. If you cannot gain access to such a scanner, most dealerships offer PCM programming for a nominal fee. Some aftermarket PCM manufacturers offer preprogrammed controllers for certain models. Check your auto parts supplier and have the vehicle identification number, mileage, and other pertinent data available.

Additional diagnostic notes:

- New or used, a replacement PCM will need to be programmed to match the vehicle in question
- Aftermarket or high-performance programmers will frequently require time for other controllers to recognize them – if they ever do

Severity Description

A stored code P0602 should be categorized as severe because conditions that caused it to be stored may affect engine management in a major way.

Reference Sources

[Diagnostic Trouble Code \(DTC\) Charts and Descriptions for P0602](#) - Pages 89-90.