



# Service Bulletin

## PRELIMINARY INFORMATION

**Subject:** Malfunction Indicator Lamp (MIL) Illuminated, Intermittently Unable to Shift into Reverse, DTC P0502 Set

**Models:** 2013-2016 Cadillac ATS  
2016 Cadillac ATS-V  
2014-2015 Chevrolet Corvette  
Equipped with Manual Transmission (RPO MG9, M3L, MEL, MEP or MEK)

**Attention:** This PI also applies to any of the above models that may be Export vehicles.

*This PI has been revised to add the 2016 Model Year, add the shift condition and update the Recommendation/Instructions section. Please discard PI1489.*

### Condition/Concern

Some customers may comment on a malfunction indicator lamp (MIL) illuminated. They may also comment that they intermittently are unable to shift into Reverse.

When checking the vehicle for DTCs, the engine control module (ECM) may report P0502 as current or in history.

This may be caused by water intrusion into the vehicle's manual transmission output speed sensor or could be induced by the customer slipping the clutch for an extended period of time, as in holding the vehicle on a hill.

### Recommendation/Instructions

1. For vehicles built prior to February 16, 2015, check vehicle history to see if the manual transmission output speed sensor has been replaced previously.
  - If the speed sensor has **BEEN** replaced, do not replace the speed sensor a second time. Instead verify connector and terminal integrity between the sensor and the engine control module (ECM). If the vehicle is a 2015 or 2016 Corvette, confirm that the vehicle has the latest ECM calibration. If not, reprogram the ECM.
  - If the speed sensor has **NOT** been changed previously, perform published diagnostics and if no root cause is found, replace the manual transmission output speed sensor. Refer to the proper replacement procedure in SI. If the vehicle is a 2015 or 2016 Corvette, confirm that the vehicle has the latest ECM calibration. If not, reprogram the ECM.
2. For vehicles built after February 16, 2015 and vehicles where the manual transmission output speed sensor has previously **BEEN** replaced, perform a visual inspection of the speed sensor and connector to ensure that the sensor is connected and terminals fully seated. If the code will not reset, **DO NOT** replace the speed sensor again. It is possible for the customer to induce this condition by slipping the clutch to hold the vehicle on a hill (~5 seconds). If the code cannot be duplicated and no root cause found, reprogram the ECM with the latest calibration.

**Note:** Engineering is evaluating the need for a revised calibration for 2013 and 2014 model year vehicles.

### Warranty Information

For vehicles repaired under warranty, please use the appropriate labor operation for the repair performed.

For wiring repairs covered under warranty, please refer to latest version of Bulletin 10-00-89-005 for warranty information on wire/connector repairs.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that

your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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