# P0839: FOUR WHEEL DRIVE (4WD) SWITCH CIRCUIT HIGH

OVERVIEW

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|---|---|---|
| **Severity** | : | Medium |
| **DIY Difficulty Level** | : | Intermediate |
| **Repair Cost** | : | **$100-$300** |
| **Can I Still Drive?** | : | **Yes** |

## What Does The P0839 Code Mean?

OBD-II trouble code P0839 and related codes P0836, P0837, and P0838 are associated with the four wheel drive (4WD) switch circuit. This circuit is also known as the transfer case control circuit.

The purpose of the 4WD switch circuit is to allow the driver to select the actuation of the 4WD system and change the transfer case gear ratios from two wheel high, two wheel low, neutral, four wheel high, and four wheel low as required based on the configuration.

When the PCM or TCM detects voltage or resistance that is too high above the normal expected value range within the 4WD switch circuit, code P0839 will be set and the check engine light, 4WD malfunction light or both may be illuminated.

A four wheel drive selector switch:

## What Are The Symptoms Of The P0839 Code?

Symptoms of a P0839 trouble code may include:

- Transfer case stuck in one gear
- Vehicle will not go into gear at all
- Transmission shifts harshly

- 4WD malfunction light illuminated
- Check engine light illuminated

## What Are The Potential Causes Of The P0839 Code?

Causes for this P0839 code may include:

- Defective 4WD switch
- Transfer case malfunction
- Faulty or damaged wiring
- Loose or defective control module ground strap
- Corroded, damaged or loose connector
- Defective fuse or fuse-able link (If applicable)
- Defective PCM or TCM

## How Can You Fix The P0839 Code?

The first step in the troubleshooting process for any malfunction is to research the Technical Service Bulletins (TSB's) for the specific vehicle by year, model and power plant. In some circumstances, this can save a lot of time in the long run by pointing you in the right direction.

The second step is to check the transmission and transfer case fluid to check the condition and confirm it as at the appropriate level. Then locate all components associated with the 4WD switch circuit and look for obvious physical damage.

Based on the specific vehicle, this circuit may incorporate several components including the transfer case, switches, solenoids, the PCM and TCM. Perform a thorough visual inspection to check the associated wiring for obvious defects such as scraping, rubbing, bare wires, or burn spots.

Next is to check the connectors and connections for security, corrosion and damaged pins. This process must include all wiring connectors and connections to all components including the PCM and TCM. Consult the specific tech data for the vehicle to verify the configuration and see if a fuse or fuse-able link is incorporated into the circuit.

## Advanced Steps

The advanced steps become very vehicle specific and require the appropriate advanced equipment to perform accurately. These procedures require a digital multi meter and the specific technical references for the vehicle.

## Voltage Checks

The reference voltage and the acceptable ranges may vary based on the specific vehicle and the

circuit configuration. Specific technical data will include troubleshooting charts and the appropriate sequence to follow assisting you with an accurate diagnosis.

If this process identifies the absence of a power source or ground, continuity testing may be required to check the integrity of the wiring, connectors and other components. Continuity tests should always be performed with the power removed from the circuit and the normal readings for wiring and connections should be 0 ohms of resistance. Resistance or no continuity is an indication of faulty wiring that is open or shorted and must be repaired or replaced. A continuity test from the PCM or TCM to the frame will confirm the serviceability level of ground straps and ground wires. The presence of resistance is an indication of a loose connection or possible corrosion.

## Severity Description

The severity of this code is normally moderate, but 4WD switch circuit problems may be severe if the transfer case is stuck in low gear which causes unwanted stress on internal transmission and engine components requiring immediate attention. In some circumstances, the vehicle may not move or shift into gear at all.

## Reference Sources

P0839 Four Wheel Drive (4WD) Switch Circuit High, OBD-Codes.