

GENERIC · POWERTRAIN

P05D2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05D2

Driver Mode Select Switch A Circuit High

P05D2 means the powertrain control module (PCM) has detected an abnormally high voltage on the circuit for Driver Mode Select Switch A, which is the input used to choose between driving modes such as Eco, Normal, or Sport. The PCM expects a specific voltage range from the switch and its wiring, and a reading above the calibrated threshold tells it the circuit is open, shorted to power, or the switch contact has failed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The check engine light or service vehicle soon message illuminates on the dashboard.
- The vehicle stays locked in one driving mode and will not respond when you press the mode select button.
- A message such as 'Drive Mode Unavailable' or 'Mode Select Fault' appears in the instrument cluster.
- Throttle response, steering weight, or transmission shift feel remains in the default setting regardless of button presses.
- Often no symptoms besides the warning light, because the default mode is still safe to drive.
- Other driver-assist or stability functions may be inhibited if the mode switch shares a network with those systems.

Common causes, most likely first

- A failed driver mode select switch with an internal open circuit or contaminated contact.
- A broken, chafed, or disconnected wire in the switch signal circuit, often at the connector or where the harness flexes.
- Corrosion or water intrusion at the switch connector or in the console area.
- A short to voltage on the signal wire from a rubbed-through insulation touching a power wire.
- A poor ground connection for the switch or the panel it mounts to, causing the reference voltage to float high.
- A faulty PCM or body control module (BCM) driver circuit, though this is the least common cause.
- Aftermarket accessories or phone chargers wired into the console circuit that back-feed voltage onto the signal line.



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P05D2 before clearing anything.
- 2 Inspect the mode select switch connector and the harness around the center console for corrosion, loose pins, or chafed wires.
- 3 Use a digital multimeter to measure the signal voltage at the switch connector with the key on and the switch in each position, comparing to the manufacturer's expected values.
- 4 Disconnect the switch and check for a short to voltage on the signal wire by measuring from the signal pin to battery positive with the key off; any voltage indicates a short.
- 5 Check the switch ground circuit for less than 0.1 volt drop while loaded, and repair any high-resistance ground.
- 6 If the wiring and ground pass, substitute a known-good switch or perform a resistance check across the switch contacts in each mode position.
- 7 After repair, clear codes, cycle the ignition, and verify the mode select function works in all positions with no code returning on a test drive.

What a high voltage on a mode switch really means

- A high-voltage code on a switch circuit usually means the PCM is seeing an open circuit or a short to power, not that the switch itself has failed, so resistance testing the switch before replacement saves money.
- The mode select switch often shares a ground with other console switches, so a single corroded ground point can set several unrelated-looking codes at once.
- Aftermarket wiring for dash cameras or phone mounts tapped into the console harness is a frequent cause of a short to voltage on this signal line that owners overlook.
- On some vehicles the mode select signal is transmitted over a local interconnect network (LIN) bus rather than a simple analog voltage, so a module communication fault can masquerade as a switch circuit high code.
- Clearing the code without repairing the circuit will usually cause it to return within one or two drive cycles, because the PCM runs a rationality check on the switch voltage at every key-on.

Can I keep driving with P05D2?

The vehicle remains safe to drive because the default driving mode is engineered to be fully functional, but you should avoid towing or performance driving until the fault is repaired since the sport or tow mode may be unavailable. Have the circuit inspected soon so the warning light does not mask a more serious code later.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Wiring diagram for the driver mode select switch circuit
- Trim removal tools for center console access
- Contact cleaner and dielectric grease for connector repair



Reading P05D2

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- D2** The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P05D1** Driver Mode Select Switch A Circuit Low · **P05D3** Driver Mode Select Switch A Range/Performance · **P05D4** Driver Mode Select Switch B Circuit · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [Disc Brake Trainer: How Car Brakes Stop a Wheel](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05d2/>

