

GENERIC · POWERTRAIN

P264F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P264F

Engine Serial Number Not Programmed or Incompatible

P264F indicates that the powertrain control module (PCM) has detected a problem with the engine serial number (ESN) stored in its memory, either because the number has never been programmed or because it does not match the number expected for this vehicle. The PCM compares the ESN against a value in a separate module or a known good copy, and when the two do not agree or the field is blank, it sets this code and illuminates the check engine light.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Computer and output circuits

Symptoms you may notice

- The check engine light is illuminated, often with no other noticeable symptoms.
- The engine may start and run normally, but some vehicles enter a reduced power or limp mode as a precaution.
- Remote start or certain convenience features may be disabled because the PCM cannot verify the engine identity.
- A message such as 'Service Engine Soon' or 'Engine System Fault' may appear on the driver information display.
- In rare cases, the engine may crank but not start if the PCM refuses to enable fuel or spark without a valid serial number.

Common causes, most likely first

- The PCM was replaced or reflashed and the engine serial number was never programmed into the new module.
- A used or salvage PCM was installed that contains a serial number from a different engine.
- The engine was replaced and the PCM was not updated to match the new engine serial number.
- Corrupted or incomplete software in the PCM after a failed programming event or low battery during a flash.
- A communication error between the PCM and another module that stores or validates the engine serial number.
- A wiring fault or poor connection at the PCM connector that interrupts the data needed to read or write the serial number.
- A software bug or calibration mismatch in the PCM that causes it to misread the stored serial number.



How to diagnose and fix it

- 1 Connect a scan tool and read all stored codes and freeze-frame data to confirm P264F is the primary fault and not a side effect of another code.
- 2 Check for any technical service bulletins (TSBs) or calibration updates from the manufacturer that address engine serial number programming issues.
- 3 Verify that the PCM part number and software calibration are correct for the vehicle's engine and model year.
- 4 Use a factory-level scan tool or equivalent programming device to read the current engine serial number stored in the PCM and compare it with the number stamped on the engine block.
- 5 If the serial number is missing or incorrect, perform the engine serial number programming procedure according to the manufacturer's service instructions.
- 6 Inspect the PCM connectors and wiring for corrosion, loose pins, or damage that could interfere with programming or communication.
- 7 If programming fails repeatedly, replace the PCM with a new or remanufactured unit and program it with the correct engine serial number.

What most technicians overlook with P264F

- A common mistake is to replace the PCM immediately, but many cases are resolved simply by programming the correct engine serial number into the existing module.
- The engine serial number is sometimes stored in more than one module, so a mismatch in a secondary module can trigger P264F even when the PCM itself is fine.
- After an engine replacement, the serial number on the new engine must be programmed into the PCM; forgetting this step is a frequent cause of this code.
- A weak battery or interrupted power supply during a reprogramming event can leave the engine serial number field blank or corrupted, setting P264F without any hardware failure.
- Some vehicles use a dedicated engine control module (ECM) separate from the transmission control module (TCM), and the serial number check may involve both modules communicating correctly.

Can I keep driving with P264F?

The vehicle is usually safe to drive because the fault mainly affects module identification rather than engine operation, but avoid towing heavy loads or aggressive driving until the code is repaired. If the engine enters limp mode or fails to start, have the vehicle towed to a repair facility rather than continuing to drive.

Tools that help

- OBD-II scan tool with manufacturer-specific software
- Factory-level diagnostic and programming tool (e.g., J2534 pass-through device)
- Digital multimeter for checking wiring and connections
- Battery charger or power supply to maintain voltage during programming
- Service information for the specific vehicle's engine serial number programming procedure



Reading P264F

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Computer and output circuits.
- 4F** The exact fault within that area.

Often seen with

P0601 Internal Control Module Memory Checksum Error · **P0602** Control Module Programming Error · **P0606** PCM Processor Fault · **P0630** VIN Not Programmed or Incompatible - ECM/PCM · **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/p264f/>

