



Electronic Control  
Module /  
Powertrain Control Module

Refer to an authorized original equipment service manual for detailed installation instructions. If you do not have the experience, proper tools or manuals, please seek the services of a qualified technician.



Replacement  
TIME:

< 1 hr

## COMMON SYMPTOMS

- Check engine light is on
- Engine stalls or misfires intermittently
- Erratic engine behavior
- Reduction in fuel efficiency, power or acceleration

## MYTH BUSTER

**Myth:** The replacement ECM/PCM can be tuned to meet the demands of aftermarket modifications.

**Busted:** The replacement ECM/PCM will function as designed by the O.E. Manufacturer and will not provide appropriate control for aftermarket modifications. An aftermarket ECM/PCM that can be tuned or mapped will be necessary for aftermarket configurations. Tuning can lead to increased performance; however, it is not recommended. Tuning can impact emissions; possibly violating local emissions laws. Tuning can also cause engine damage if done improperly.

## TIPS

- Before installation of replacement module, review and record all stored diagnostic trouble codes with a suitable scanner.
- Review all related O.E. technical service bulletins to aid in diagnosis. Follow all related diagnostic flow charts to find the root cause.
- Relearn procedures specific to the vehicle application must be followed after installing a reprogrammed PCM. Several relearn procedures may apply.
- Most PCM failures are caused by a shorted solenoid or actuator.
- Perform a voltage drop test to verify all sensor grounds before PCM install.
- When replacing the original PCM, always match the original computer service number.
- Ford - Certain vehicles may incorporate the Passive Anti-Theft System (PATS) which requires a relearn procedure and key reprogramming.
- Chrysler - Vehicles with a Flash-technology PCM must be reprogrammed to the latest calibration available by VIN.
- GM - Certain vehicles may have one of three security systems available that require specific relearn procedures when replacing the PCM.
- **Vehicle specific Flash programming may be required on or off the vehicle. Additional vehicle specific on-car programming may also be necessary after installation to prevent drivability and starting issues. Refer to a vehicle specific service manual or OE Manufacturer service site for Flash programming detail.**

# CARDONE

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