

# ON-VEHICLE ADJUSTMENTS

## 2001 Chevrolet Camaro

2001 ENGINE PERFORMANCE  
On-Vehicle Adjustments - Cars

Except Metro & Prizm

### ENGINE MECHANICAL

Before performing any on-vehicle adjustments to fuel or ignition systems, ensure engine mechanical condition is okay.

CAUTION: When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION before disconnecting battery.

### VALVE CLEARANCE

NOTE: All models use hydraulic lifters. Adjustments are not required.

### IGNITION TIMING

NOTE: All engines are equipped with C3I, DIS or IDI ignition systems. Timing on these systems is not adjustable.

### IDLE SPEED & MIXTURE

NOTE: Idle mixture is controlled by Powertrain Control Module (PCM). Adjustment is not possible. After replacement of Idle Air Control (IAC) valve, system must be cycled as identified for PCM to properly control idle speed. If idle speed is not okay after cycling system, problem is usually caused by a dirty throttle plate or vacuum leaks. Ensure all vacuum components are functioning properly.

### IDLE SPEED (4-CYLINDER)

1.9L (SC1, SC2, SL, SL1, SL2 & SW2)

Start engine and run until normal operating temperature is reached. Slowly vary engine speed between idle and 3500 RPM 3 times. PCM will now properly control idle speed.

2.2L (L100, L200 & LW200)

Turn ignition on with engine off for 10 seconds. Turn ignition off for 10 seconds. Start engine and idle for 30 seconds. Slowly vary engine speed between idle and 3500 RPM 5 times. Return engine to idle. PCM will now properly control idle speed.

2.2L (Cavalier & Sunfire) & 2.4L (Alero, Cavalier, Grand Am & Sunfire)

NOTE: Information for bi-fuel Cavalier is not available.

Turn ignition on with engine off. Turn ignition off for 10 seconds. Start engine and idle. PCM will now properly control idle speed.

## IDLE SPEED (V6)

### 3.0L (Catera)

Using scan tool, verify no DTCs are set. Turn ignition off for 30 seconds. Turn ignition on with engine off for 30 seconds. Turn ignition off. PCM will now properly control idle speed.

### 3.1L (Century)

Turn ignition on for 10 seconds. Turn ignition off for 5 seconds. Start engine and run until normal operating temperature is reached. PCM will now properly control idle speed.

### 3.1L (Lumina, Malibu & Grand Prix), 3.4L (Alero & Grand Am) & 3.8L (Bonneville, LeSabre & Park Avenue)

NOTE: Information for Camaro and Firebird with 3.8L engine is not available.

Turn ignition on, then off. Turn ignition on, then off again. Start engine and run until normal operating temperature is reached. PCM will now properly control idle speed.

### 3.4L (Impala & Monte Carlo) & 3.8L (Grand Prix, Impala, Monte Carlo & Regal)

Turn ignition on, then off. Turn ignition on for 10 seconds, then off for 5 seconds. Start engine and run until normal operating temperature is reached. PCM will now properly control idle speed.

### 3.5L (Aurora & Intrigue)

Turn ignition on with engine off. Turn ignition off for 5 seconds. Start engine and run until normal operating temperature is reached. PCM will now properly control idle speed.

## IDLE SPEED (V8)

NOTE: On Camaro, Corvette and Firebird with 5.7L engine, when PCM or battery is disconnected, the PCM must learn idle position again. Engine idle will be unstable until PCM learns idle position

### 4.0L (Aurora) & 4.6L (DeVille, Eldorado & Seville)

Start engine and idle for 15 seconds. Turn ignition off. Wait 15 seconds. Restart engine. PCM will now properly control idle speed.

### 5.7L (Camaro, Corvette & Firebird - Automatic Transmission)

Turn ignition off. Reconnect PCM battery feed. Turn off all accessories. Set parking brake and block drive wheels. Start engine and run until coolant temperature is more than 176°F (80°C). Put transmission in Drive. Allow engine to idle for 5 minutes. Put transmission in Park. Allow engine to idle for another 5 minutes. Turn engine off for 30 seconds. PCM will now properly control idle speed.

### 5.7L (Camaro, Corvette & Firebird - Manual Transmission)

Turn ignition off. Reconnect PCM battery feed. Turn off all accessories. Set parking brake and block drive wheels. Put transmission in Neutral. Start engine and run until coolant temperature is more than 176°F (80°C). Allow engine to idle for 5 minutes. Turn engine off for 30 seconds. PCM will now properly control idle speed.

## THROTTLE POSITION SENSOR

NOTE: Ensure Throttle Position (TP) sensor voltage is as specified. TP sensor is not adjustable. For further testing procedures, see appropriate SELF-DIAGNOSTICS article.

NOTE: On some models, throttle control is electronic with no mechanical link from engine to accelerator pedal. The PCM and Throttle Actuator Control (TAC) module monitor the position of accelerator pedal based on signals from a nonadjustable Accelerator Pedal Position (APP) sensor. The APP is mounted above the accelerator pedal.

#### Throttle Position Sensor Learn (4.6L)

NOTE: Ensure accelerator and brake pedals are free from any obstructions while performing Throttle Position (TP) sensor learn procedure. PCM will not perform learn function with accelerator pedal or brake pedal obstructions.

Turn ignition on. Wait one minute. Turn ignition off. Wait 15 seconds. PCM will now properly control idle speed.