

## Throttle Related Symptoms When the Engine Lacks Throttle Response

When the customer complaint is poor or no acceleration, or the engine has lost power, where would you start with the diagnosis? Most would assume something major and expensive to repair. Following are some basic checks to consider before getting too deep into the diagnostics.

### MAXIMA LOSES POWER

A complete service had been performed and the customer was looking forward to a long-planned road trip. Unfortunately, it would be cut short and he would have to settle for a ride on the back of a wrecker. While cruising down the highway the vehicle started losing power and gradually came to an idle speed. His first thought was a transmission related problem had occurred. A wrecker was summoned, and the vehicle was towed to a transmission repair shop. Fortunately, the transmission shop was an honest establishment and recommended some basic repairs instead.

When the vehicle was originally serviced, the technician checked and recommended a battery replacement due to the customer's complaint of a slow crank condition. Low voltage had been the culprit. It would be determined the problem involved more than the battery. The technician should have taken the diagnosis a step further and checked the charging system output. The discharged battery was due to no alternator output. With 170K miles on the Maxima with its original alternator, the brushes in the alternator were history. The vehicle had been operating off battery voltage with no replenishment. Once the battery voltage reaches a given threshold, usually in the ten-volt range, electronic systems will stop communicating. The Maxima was equipped with electronic throttle control. The engine had lost power and would only idle due to no throttle control from the computer. Once the alternator was replaced and the battery charged, the customer was back on the road again. Never replace the battery without verifying charging system output.

### PEDAL RIDERS AND THROTTLE CONTROL

Riding both pedals can present a two-part problem. Simultaneously depressing the accelerator pedal and brake pedal has long been an issue, especially

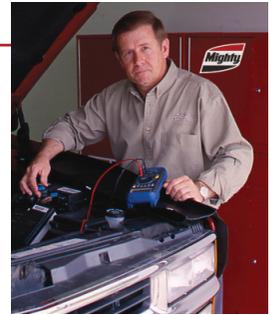
with accelerated friction wear. Habitual offenders can usually be recognized by observing the wear pattern on the brake pedal, as excessive wear is usually present on the left corner of the rubber pad, in addition to premature friction wear and warped rotors.

With today's electronics, a pedal rider brings on a new set of challenges and diagnostics. Audi reports pedal rider concerns on 2000-2018 applications with customer complaints of the engine returning to an idle speed of 1,400 RPM even with the accelerator pedal depressed. The engine may encounter a hesitation or lack of power during acceleration. These symptoms occur when the driver depresses the accelerator and brake pedals simultaneously. With the introduction of electronic throttle control Audi has incorporated an RPM control feature into the computer software. Application of the brake and accelerator pedals simultaneously will result in the following:

- 1) The brake pedal function will override the throttle application.
- 2) If the brake pedal is applied while the accelerator pedal is depressed, the engine will return to 1,400 RPM in approximately two seconds.
- 3) If the accelerator pedal is depressed while the brake pedal is depressed, the vehicle will accelerate at a slower throttle response.

When diagnosing these symptoms, a road test with the customer should be performed. This will allow the technician to observe the driving habits of the customer in relation to brake pedal and accelerator pedal application. Explain to the customer that brake application overrides the throttle application at all times. This mode of driving is not recommended, as it will result in driveability issues.

Summary: The symptoms illustrated are real world conditions the technician must consider when making a diagnosis. Does the electrical system have sufficient voltage for the system and components to communicate? Further, he must be aware of safeguards built into the system to prevent a catastrophic event.



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Stranded miles from home on his way to the tournament, Vince finds a unique way to deal with disappointment