## **How to Diagnose Vehicle Fuel Problems**

By Deanna Sclar from Auto Repair For Dummies, 2nd Edition

If the engine turns over but doesn't start running, the first question you need to answer is whether your fuel tank is empty. Even if your fuel gauge says that you still have some fuel, the gauge may be on the blink. When did you last fill the tank?

Sometimes the problem is too much fuel. If you open the hood and find that everything is covered with gasoline, don't try to start the engine! Gasoline is too flammable to monkey around with. Just hoist that white flag and get help.

If you're not out of fuel and your vehicle lost power before it died, fuel is probably not getting to the engine. Here are some additional reasons that specific types of vehicles may not be getting enough fuel.

- Gasoline- and diesel-powered vehicles: If you have a modern vehicle with a
  multiport or sequential fuel injection system, either the fuel pump isn't pumping
  fuel or the ECU isn't triggering the fuel injectors. In either case, a professional
  will have to troubleshoot it.
- Ethanol, methanol, and flex-fuel vehicles: The potential problems are the same whether the vehicle is running on pure gasoline or on gasoline mixed with alcohol: Either you're out of fuel or the fuel pump or fuel injectors aren't working properly. In any case, there isn't much you can do but call for help and be patient until it arrives.
- Electric vehicles: If an electric vehicle suddenly stops running, the battery that
  drives it (the big one, not the little guy under the hood) has run out of juice. Either
  you've driven too long without recharging it or the system is malfunctioning.
  Dashboard malfunction indicator lights should alert you to this problem before
  the vehicle stops completely.
  - If a cable that conducts the current from the battery to the motor has disconnected, don't try to deal with it yourself. You can't trace the cable to or from the motor to the battery, and the voltages are so high that you could put yourself in danger if you try to reconnect any loose cable or wire you find. Get the vehicle towed to a repair shop that can handle battery-powered electric cars and trucks, and let them do the job.
- **Hybrids:** Hybrids combine a gasoline engine and an electric motor. If a hybrid vehicle suddenly stops running, the systems are too sophisticated to try to troubleshoot yourself, and don't expect the tow truck operator to be able to troubleshoot or repair it. Because being pulled by a tow truck can damage your

- hybrid, request a flat-bed tow truck to get the vehicle to the nearest dealership that sells your vehicle and let them deal with it.
- Natural gas, hydrogen, fuel cells, and other exotica: Natural gas and hydrogen are stored under great pressure and are definitely too dangerous to monkey with yourself. If your vehicle operates under any of these systems, request to be towed by a flat-bed truck to your nearest dealership because most service stations aren't able to deal with these fuel sources either.

Source: <a href="http://www.dummies.com/how-to/content/how-to-diagnose-vehicle-fuel-problems.html">http://www.dummies.com/how-to/content/how-to-diagnose-vehicle-fuel-problems.html</a>