

## Spontaneous combustion Video Clip

There is a pop bottle on the cart with a pump on the top that looks a lot like a cap. Observe the temperature strip in the bottle. Pump until you see the temperature strip change. Wait a couple minutes. Unscrew the cap and let the pressure out, and watch the temperature strip.

Check out the spontaneous combustion video clip that follows. A small piece of cotton was at the bottom of a compression chamber. The plunger was slammed down quickly, and the heat caused by compressing a gas made the temperature increase to the point that the cotton caught on fire. The fire did not last long because the conditions of high temperature and concentrated oxygen make for a quick burn.

Diesel engines work this way. There is a glow plug that is hot, but not hot enough to ignite the fuel/air mixture. When the pressure is increased by the piston compression, the temperature reaches a point where spontaneous combustion begins the explosion that drives the piston to power the wheels.

Explain spontaneous combustion in your own words.