

Caleb Wright
Hot or Cold?

Finding the proper placement in a car for a hydrogen unit is sometimes overlooked. Many people will place the unit "where it fits," or "where it is easiest to get to." It is not being considered as to which place would be the most efficient to place the unit. There are several different parts of an engine which get hotter or colder depending on location in the frame of the car. I wanted to find which temperature area would benefit electrolysis the most. I used water that was 94 degrees Celsius, water that was 40 degrees Celsius, and water that was 8 degrees Celsius to simulate hotter or cooler parts of an engine. By testing which temperature would produce the greatest amount of hydrogen in a set amount of time, I was able to determine which temperature is most beneficial to the electrolysis process. Hot water was hypothesized to be the most efficient and was proven to be a valid hypothesis from the accumulated results. By increasing the thermal energy of the water, the electrolyte dissolves much more thoroughly and quickly, releasing a greater amount of ions to assist electrolysis than a lower temperature solution.