A Brief Study in the Effects of the Bernoulli Principle when Applied to an Underwater, Inverted Foil

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The purpose of this project is to demonstrate how the Bernoulli Principle can be used underwater to provide a downward force to counteract the natural buoyancy of a submersible craft by means of an inverted foil. The hypothesis of this project is that, due to the shape of the wings, the Bernoulli Principle will counteract the natural buoyancy of the craft and cause it to dive. This experiment used a submersible craft with inverted wings to test how the Bernoulli Principle functioned when the craft was pulled through water. The results of the project were that when the Aquaplane was pulled through the water it descended once it reached enough speed to counteract the bouncy. The conclusion of the project is the Bernoulli Principle can be applied to an inverted foil to contract the natural force of buoyancy, and facilitating a submersible vehicle. The application of the project is still being explored; however, it can be applied to underwater vehicles to provide means of submersion, removing the need for space-consuming ballast, and freeing this space for other uses.

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