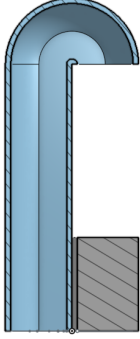



Overview	<p>The valve is a mechanical device within the torch head tank; when the fuel level within the torch reaches a desired level, a float action operates the valve, closing it until the fuel level in the torch goes down again.</p>
Basic Schematics	 <p>The valve consists of two main parts: the valve head (blue) and the valve float (grey). The valve operates on the principle of buoyancy; as the fuel level in the torch tank rises, so will the float until it rises into the closed position.</p>
Testing Methods	 <p>Valve heads were placed in a clear container for observation, which was then connected to the pump/water source.</p>
Issues	<p>As with most 3D printed items, the largest issue with this portion of the project has been tolerancing</p>
Going Forward	<p>If the tank suddenly became modular and the top could be removed like a cap, a more reliable valve could be designed and replace the complex and difficult to manufacture valve.</p> <p>Also, if the system continues to use a 12V ground wire for power to the ignition system then theoretically this wire could be used to power a set of solenoid valves in the torch bases.</p>