Most user’s of LPG or Propane gas, assume that their fuel is clean, free of water, particulate, heavy oils, harmful chemicals such as sulfur, when in fact, this may not be true. Refinery practices, inadequate filtration, holding tanks, delivery trucks, all add to the problem. What is needed is a filter that insures the fuel entering the system is free of contaminants but at a price that is affordable.

BlueMoon’s® new Multi-Stage Filtration is based upon a combination of the principles; fluid movement, particulate and droplet, action, re-action, interception plus molecular motion along with diffusion.

- **Stage One:** Designed to remove and then hold the water, heavy oils, and particulate from the fuel as it passes through the filter. As the fuel moves through the first stage water droplets collide forming larger droplets. These larger droplets fall out of the fuel flow and are trapped. The larger, heavier particulate, by nature, is going to fall out of suspension in this stage. Inertia and size will also trap medium size 40- micron to small 20-micron particulate. Heavy oils will also be removed and held in this stage, along with most sulfur. As an added benefit, when the size of the water droplets increases, smaller particulate, heavy oils, sulfur, etc., are encapsulated in the water droplets and held.

- **Stage Two:** Has spacing before and after, so medium size particulate and droplets can collide to form larger droplets. While this material is lighter than what is collected in the stage one, because of the unique design, the lighter particulate and droplets either are held in this stage or will be held when they reach a larger size drop back to the first stage. This stage removes particulate and water down to the 20-micron level. By designing the second stage to allow the particulate and water droplets as they become larger to move back to the first stage, prolongs filter life. This is a combination of Van der Waai and Coanda principles of particulate and fluid movement.

- **Stage Three:** As the fuel enters the stage where small particulate, water droplets and heavy oil droplets do not follow the flow path perfectly, but randomly collide with each other. The walls of this filter stage, and/or the filter media causes larger droplets to form, plus encapsulating particulate, and heavy oil aerosol droplets, within the small micron 10-micron filter stage. The use of interception and diffusion was the resulting filtration technique for this stage. The integrated result of molecular motion and filter media.

- **Stage Four:** The final stage, was design to present optimum structure of filter media. Not channel-like but rather to continuously present new rough surfaces as obstacles in the flow path, causing the finer particulate, water, and heavy oils to strike the rough surfaces and each other, until they become large enough to be held in this media. Since most of the larger water, heavy oils, and particulate molecules have been removed before entering this phase, the 5-micron stage is able to work longer and more efficiently. BlueMoon’s® Multistage System design does not have leaks around the filter cartridge and unfiltered fuel is not allowed into the system.