



## **THE AIM FUEL PURIFIER**

For many years, the proven technology of the AIM Fuel Purifier has been successfully utilized in the Transportation, Marine, Construction, Power Generation and Oil & Gas Industries.

Unlike its competitors, the AIM Purifier works without the use of a replaceable or cleanable filter element, cartridge or bowl. It doesn't use magnets or chemicals and contains absolutely no moving parts. Installing an AIM Purifier in your fuel system will finally give you the confidence that Engine shutdowns due to clogged fuel filters can truly become a thing of the past and a high quality fuel is always supplied to your Engines and Generators.

## **FREQUENTLY ASKED QUESTIONS**

***Q: Why should I spend more money when I already have filters?***

**A:** While all the popular fuel filter brands are excellent products in their own right, they all have one very important drawback. As with any filter that is composed of a fiber medium, there is only so much contamination they can cope with before becoming clogged. Anyone who has ever used a vacuum cleaner is aware of the gradual loss of suction as the cloth filter becomes choked with dust.

When the contaminate build-up on the outside of a media fuel filter becomes excessive, the flow of fuel becomes reduced and eventually leads to Engine shutdown due to fuel starvation. For those

**Engines that do not automatically bleed air from the injection system, a restart can be a lengthy procedure even after replacement of the dirty filter.**

**Installing an AIM Purifier up-stream of the media filter prevents it from becoming suddenly clogged by an overwhelming amount of contaminants. Why not let the media filter do what it is really good at, catching all the minute particles and allow the AIM Purifier to do the 'heavy lifting' and catch the other 99% of water and larger elements which unfortunately are all too common in today's fuels.**

**Which would you rather do? Open a valve on the bottom of the AIM Purifier for a few seconds to quickly drain off the contaminates or find a new filter cartridge, unscrew the lid, remove, replace and dispose of the clogged filter, top up the filter housing with clean fuel and replace the lid after first changing the cover gasket and 'O' ring.**

**An additional benefit reported by AIM Purifier users is all the money they save from having fewer filter changes.**

***Q: What exactly is 'Algae' and why does it grow in my fuel tank?***

**A: The word 'Algae', although widely used throughout the fuel industry to describe the slimy growth that is commonly found infesting fuel tanks and filters, technically speaking, is incorrect. What you are actually seeing are different types of Bacteria the two most common of which are Enterobacteria, found in the human stomach and most water, and Klebsiella, found in human lungs and the air. These Bacteria thrive at the interface level between the fuel and the water which accumulates at the very bottom of the tank.**

***Q: How does water get into my fuel tank?***

**A: Every fuel tank requires a breather vent to compensate for the potential vacuum created when fuel is withdrawn by a lift or transfer pump. When the warm, humid air that is constantly entering the tank makes contact with the cooler exposed areas above the fuel level, the formation of condensation is inevitable. The degree of condensation depends on the composition of the tank & the relative humidity of the air. Aluminum and Stainless tanks form condensation far quicker than for instance Fiberglass and plastic tanks. After a while, the drops of**

**water forming on the underside of the tank tops become heavy & they drop into the fuel. As fuel is lighter than water, these droplets migrate down to the bottom of the tank where they accumulate over time.**

**Water can also become an unwanted visitor in the fuel tank by entering through a leaking 'o' ring on the filler cap, corrosion, a poorly positioned breather vent or from the source of delivery.**

***Q: How can I prevent the 'Algae' (bacteria) from clogging my Filters?***

**A: Installing an AIM Fuel Purifier up-stream of the media filter will remove 100% of the free water in the fuel and 99% of all other contaminants including "Algae, Sludge, Rust and Dirt, leaving the media filter to do what it is very good at, taking out all the miniscule particles at around the ten Micron level and below. This will give greatly extended filter life and avoid sudden Engine shutdowns when filters become clogged by a sudden influx of contaminants. Logically, it doesn't make any sense to use a ten Micron filter to remove sludge and bacteria that are hundreds of times larger and can very rapidly reduce available filter surface area.**

***Q: How does an AIM Fuel Purifier work?***

**A: Unlike its competitors, the AIM Purifier works without the use of a replaceable or cleanable filter element, cartridge or bowl. It does not use magnets or chemicals and contains no moving parts. The AIM fuel Purifier is a unique product that uses two well known fuel separation principles, centrifugal and coalescence.**

**As fuel enters the first stage it flows downwards in a circular movement in a similar manner to water flowing down a sink drain. When it reaches the bottom of the purifier it slows rapidly, allowing any free water droplets, "Algae" and other contaminants to maintain their mass and stay at the bottom of the purifier for later drainage. The lighter fuel then rises up through three perforated baffle plates to stop any particulates and attract by means of coalescence, any water droplets still remaining in the fuel. In the final stage, the fuel passes through our patented coalescence medium to ensure that any remaining water particles will be removed from the fuel stream.**

***Q: Where should I mount the AIM purifier in my existing system?***

**A: If installing the purifier directly to the Engine's fuel line, it should be mounted at the same level and before all media type filters or magnet based fuel conditioners. The same holds true for a fuel transfer/polishing system. If possible, as with any fuel filter or purifier, try to locate the purifier below the level of the fuel in the tank from which it draws as this will allow for easy priming after purging.**

**Because there is no physical barrier or filter element inside the AIM Purifier, as is the case with all types of media based filter, there is negligible resistance to fuel flow and the purifier can therefore be mounted on either the pressure or the suction side of a fuel pump.**

**Some people, with the clever use of a few three way valves and a separate fuel pump, have used their Engine mounted AIM Purifier as an independent Fuel Polishing system when the Engine is shutdown. Others have reported using only the AIM Purifier in conjunction with the spin-on cartridge filter supplied by the Engine manufacturer with great success.**

**Most people however, still prefer to install an additional, remotely mounted primary filter as it is generally easier to change than the one on the Engine and has a greater capacity for capturing contaminants.**

***Q: Which AIM Purifier is the right one for my application?***

**A: With capacities ranging from 2 Gallons per minute to 400 Gallons per minute and port sizes from 1/2" to 4" N.P.T., there is an Aim Fuel Purifier for every application. If placed directly in an Engine's fuel line, the maximum possible flow including fuel return must be determined before ordering the purifier. This information should be readily available from the Engine manufacturer, your local dealer or the charts in the back of this booklet. If you are using the purifier as a polisher in a transfer system it is necessary to match the model to the rated flow capacity of the pump. When more than one engine is connected to a Universal Purifier, The capacity of the purifier must meet or exceed the maximum possible flow when all engines are running at maximum Load. There is no minimum flow necessary for the purifier to function.**

***Q: What maintenance is necessary with the AIM Fuel Purifier?***

**A:** Because an AIM Purifier has no moving parts or replaceable filter element, it is essentially maintenance free. The optional water/‘algae’ sensor will indicate when the contaminants have reached a certain level in the sump. Because the Purifier has such a large sump capacity, it will continue to remove contaminants for a long time after that level has been reached. Draining the sump is a very simple process. Just open the valve on the bottom of the purifier and stop when you see a stream of clean fuel.

In comparison to changing a fiber type filter, it is apparent that the AIM Purifier takes only a few seconds to purge while changing a filter cartridge will obviously take much longer and invariably involve getting covered in fuel.

***Q: Can I use an AIM Fuel Purifier for Gasoline as well as Diesel fuel?***

**A:** As long as all regulations regarding safe handling of Gasoline are strictly adhered to, there is no reason why the AIM Purifier should not be used for this purpose. Because no potential ignition sources such as electrical connections are allowed anywhere near a Gasoline installation, the optional water/algae sensor or heater cannot be used for this application.

***Q: Where are AIM Fuel Purifiers made?***

**A:** All Aim Fuel Purifiers are fabricated entirely in the U.S.A. They are made from the best quality Steel and the finished product is powder coated to provide full protection from corrosion. Before they leave the factory, all Purifiers are pressure tested and visually inspected for flaws.

***Q: How does an AIM Fuel Purifier compare to a conventional Centrifuge Purifier?***

**A:** Prospective buyers often ask how a product so economical, small and simple, can perform the same task as an expensive, larger and far

more complicated machine. The answer to that question is easy. Why use a Sledgehammer to crack open a Walnut. Separating fuel from water and contaminants is actually a very simple task as they do not mix well in the first place.

1. ***Installation:*** - A Centrifuge Purifier always requires electrical power, a fresh water connection, a permanent drain to a waste tank, a heavy-duty mounting platform and a remote alarm panel to warn of system failure. The AIM Fuel Purifier requires no electrical power since flow through of fuel is provided by existing lift or transfer pumps. (The optional water sensor would need a low voltage D.C. connection). Because of its small size and weight, the AIM unit can easily be bolted to a nearby bulkhead. No special waste drain is necessary as all contaminants are removed by a valve on the bottom of the unit and are generally small enough in volume to be disposed of in a five gallon pail, thus negating the need for a separate waste tank.
2. ***Cost of unit:*** - The initial cost of a conventional Centrifuge Purifier is approximately ten to twelve times the cost of a similar capacity AIM Fuel Purifier plus the additional expense of installing the power, fresh water feed, drain and waste tank.
3. ***Maintenance:*** - Because it has no moving parts, the AIM Purifier requires no maintenance except for the routine drainage of contaminants. In comparison the Centrifuge Purifier needs constant upkeep. With so many moving parts and high operating speeds, a constant vigilance is vital for safe and reliable operation. Due to the fine tolerances involved, a highly skilled, and therefore, highly paid Technician is always necessary when servicing a Centrifuge Purifier.
4. ***Efficacy:*** - People frequently inquire about the AIM Purifier's ability to remove solids to a certain micron level. Since the unit uses centrifugal force to separate out heavier particles (water, bacteria, sludge and solids) from the fuel, separation is measured by weight instead of size (micron). For example, the AIM Fuel Purifier will easily separate and remove a grain of sand but will be unable to separate out a chunk of Styrofoam.

5. **Reliability:** - Obviously, a Fuel Purifier with no internal moving parts, no electrical connection, that is simple to operate and has no maintenance schedule is going to be far more reliable than other more complicated systems.
6. **Weight:** - In Marine applications on high performance craft, every extra pound carries a speed penalty. The conventional centrifuge is extremely heavy all by itself without taking into account the wire from the distribution board, the piped water connection, the remote panel, the sturdy mounting frame and the need for a waste oil tank and contents.

After so many years of being told that fuel separation requires complicated and costly machinery, people naturally have a hard time believing what they actually see with their own eyes at one of our practical demonstrations. Fortunately, this disbelief is starting to change as more and more people are enjoying the benefits of the AIM Fuel Purifier and many more satisfied users are happy to pass on their good experience to others.

Seeing is Believing! The staff at Agrindmar LLC will be happy to arrange a hands-on demonstration of the AIM Fuel Purifier's remarkable efficiency with one of our portable demo units. If you are currently experiencing "bad" fuel problems, we are up to any challenge. Bring us your sample and we will show you the "ultimate solution" without the need for Chemical additives, Magnets or Filter elements.

For sales and further information please contact:

**Agrindmar LLC.**

**Tel: +1 866 448 4231**

**E-mail: [info@agrindmar.com](mailto:info@agrindmar.com)**

**Website: [www.agrindmar.com](http://www.agrindmar.com)**

