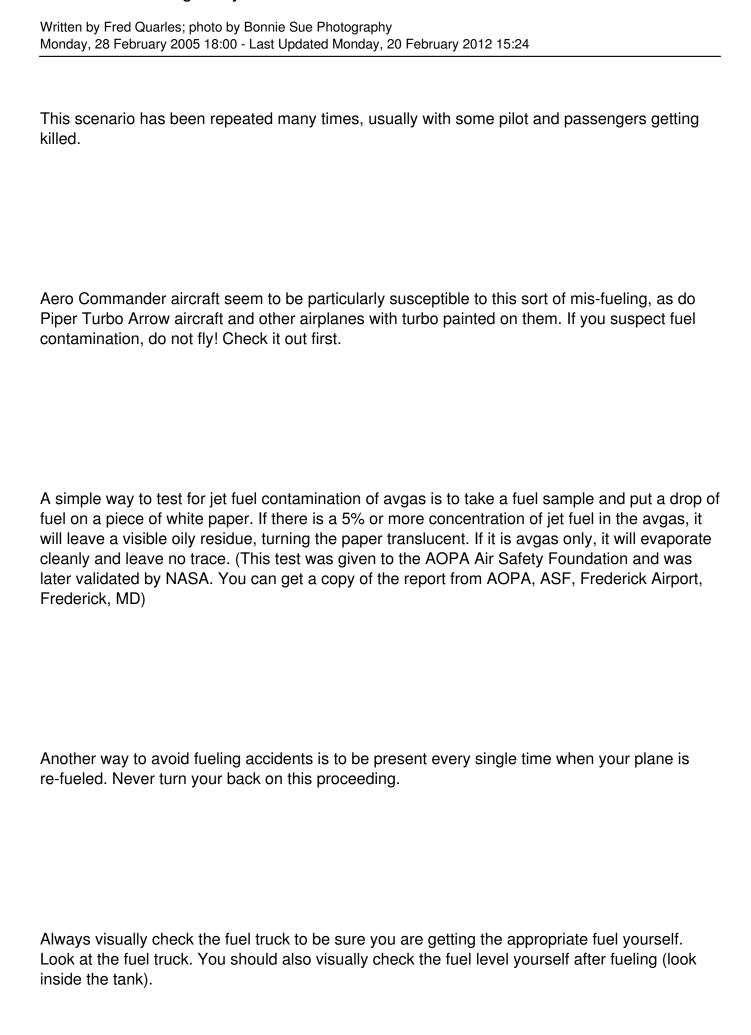
Written by Fred Quarles; photo by Bonnie Sue Photography Monday, 28 February 2005 18:00 - Last Updated Monday, 20 February 2012 15:24

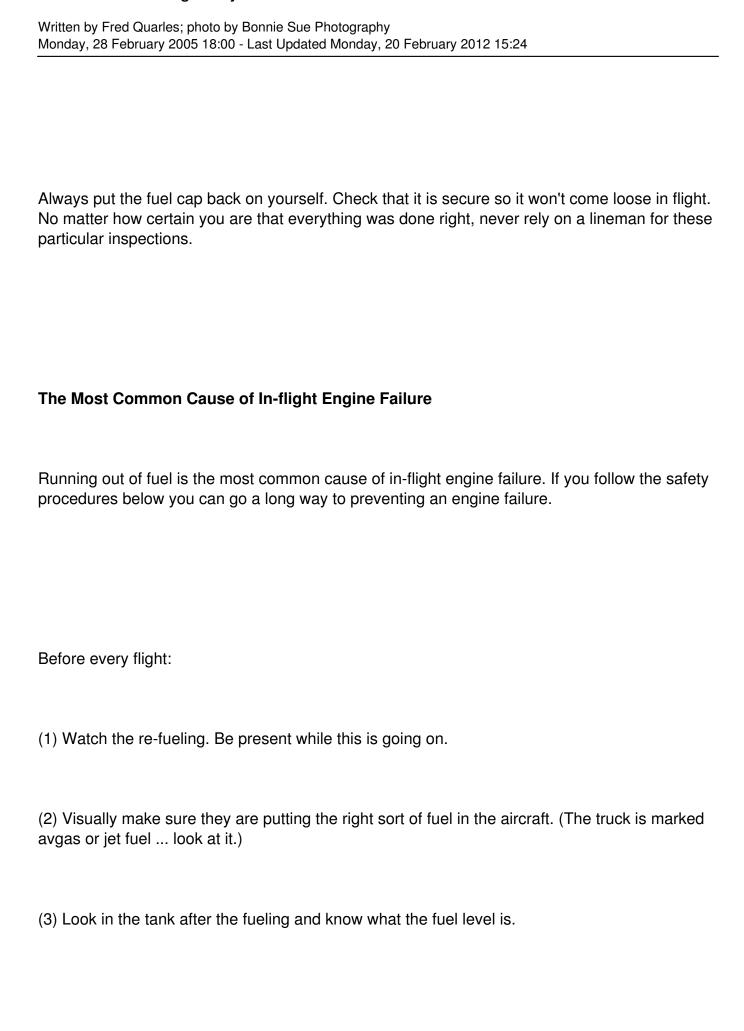


If you think that refueling is a simple process that can be taken lightly, think again. Cross-contamination, water, and various other problems can cause your engine to mis-fire when you least expect it. Be prepared and be safe by following a few simple guidelines.

### Mis-fueling

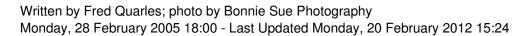
Certain piston aircraft are particularly susceptible to mis-fueling incidents and you should be especially vigilant if you are flying one of these birds. Among them are the turbocharged versions of many airplanes. In the desire to be the hottest thing going, manufacturers often label their aircraft "turbo" or some other designation. And inadequately trained linemen thinking that these are kerosene burning jet airplanes of some sort often put jet fuel where avgas should have gone. This creates a lethal combination for many unsuspecting pilots. The plane would start and apparently run fine, even enough for takeoff, but would start having engine detonation problems about the time the point of no return was reached on takeoff, causing an engine failure shortly after takeoff at low altitude, resulting in a fatal crash.





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(4) Always put the fuel cap back on yourself. Make sure it is aligned properly and closes properly. If it comes loose your fuel will siphon out without your being aware of what is happening.
(5) Keep a large reserve of fuel. The lower your experience level, the more important this is.
Fuel reserves give you the luxury of time to sort out a problem if you are lost, disoriented, or otherwise have a time-consuming problem in flight. If you are low on fuel, your anxiety level will increase exponentially, making it difficult to think under stress and increase your chance of an accident.
After my first experience long ago in nearly running out of gas, I have made it a practice to keep one fuel tank in reserve. I use a little bit of it in flight to confirm it is not contaminated and when am sure it is ok, I use it for the next takeoff and keep the other tank full for the next leg. This way, I minimize further the chance of getting caught by surprise, either on takeoff or landing, with contaminated fuel. Losing an engine on takeoff, at night, or on landing is very disconcerting.
Today's navigation equipment makes it possible to navigate more precisely, but this stuff can and does fail. If you are low on fuel when an equipment failure occurs, your chances of running out of gas go way up. This is even more true at night, in haze, or VFR conditions.



Be smart and take precautions every time you refuel. Your life and the lives of your passengers depend on it.

About the author: Fred H. Quarles is an ATP-CFII with more than 3,000 hours of flight time in more than 30 aircraft.