



Training Bulletin 05-2008
Fuel Contamination and Pre-flight Procedures
05/22/2008

Pre-flight operations are the responsibility of the PIC. But as we know, the procedures are often placed in the hands of the student. This is common in the training environment, but we must maintain vigilance over the pre-flight process and ensure that all components are correctly completed. Remember, it is you, the PIC that is responsible for the safe operation of the flight.

On first flight(s) of the day, please be very diligent in your aircraft fuel sampling, especially after a large rain event or in the event that an aircraft was allowed to sit for longer periods of time with fuel levels less than full. Remember that in vapor spaces such as less than full fuel tanks, water can form from condensation. Fuel samples must be checked closely for contamination from water formed inside the tank or from water that has made its way into the fuel tanks from an outside source.

During student pilot pre-flight(s) all instructors should be with their students during the pre-flight. You should supervise and instruct during this period.

In the sampling process, if necessary, you should take more than one sample from the fuel system. For example, if your aircraft is equipped with only one fuel sump per wing, consider taking more than one sample especially if the plane has been sitting for an extended period of time. As you recall, on the older, normally aspirated - carbureted airplanes the fuel strainer is the lowest point of the fuel system. Typically, water will be found in this location, but do not forget to take into account the grade of the surface that the aircraft is parked on. It is important to consider that the aircraft may be on a slight slope. This uneven surface may allow water to pool in the lowest point and that point may not be the fuel strainer or the wing sump.

If the fuel samples are not contaminated consider pouring them back into the fuel tanks to avoid damage to the environment and to save fuel.

For those who have not seen the picture of the sample taken from a recent fuel starvation, incident, see below:

