



Piranha

Canopy Breaker Tool

(When your life depends on it!)

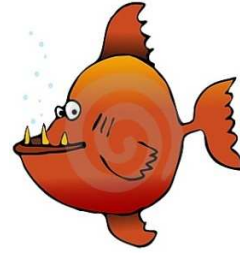
Everyone who flies at one time or another has given thought to potentially being trapped in an aircraft with few options for escape. To compound this predicament you can enter into a water landing, have leaking fuel or fire issues and you really don't have a viable escape plan. Plexiglas is not very thick but still difficult to break with a hand, fist or elbow. What if you had the foresight to attach a device inside the cockpit that gave you an option – a Piranha Canopy Breaker Tool attached to the airframe which can be easily reached in these types of emergency situations?

Whether your airplane is a warbird, acrobatic, experimental, or even standard category, in a time of crisis the ability to escape from a damaged aircraft is paramount. The Piranha Canopy Breaker Tool is a robust device with a sharp edge on one end. The tool is secured inside the aircraft cockpit to a frame member or seat frame, within easy reach of the pilot. A plastic cover is over the blade end for tactile and visual identification and protects the pilot from the blade end. In an emergency situation the pilot locates the Canopy Breaker Tool, removes the safety pin / lanyard which secures the tool to the aircraft and the red cap. The pilot firmly grasps the tool with one hand and places the other hand underneath the tool, then positions the blade parallel to the canopy side frame, near the frame and uses very strong upward thrusts aiming one of the blade points at the Plexiglas. When the canopy fractures, continue striking the end of the cracks to secure an opening large enough to escape, keeping in mind the fractured edges are sharp so make a hole of sufficient size for egress.

No one ever really anticipates these situations, but preparation is always the key to being a safe pilot. We check the weather, the aircraft, our currency, but sometimes fail to prepare for the negative side of aviation. We may have done almost everything correctly, but one little incident puts us into a situation very rapidly, where survival becomes very important and time is critical. The Piranha Canopy Breaker Tool can be another one of those items in our *safety checklist* that could save our life. Plus it could also be used in an external survival situation as a personal protection tool when you are safely outside the downed aircraft. You have done your flight planning, so don't forget about your survival planning – the key is to “survive alive”.

The unit is made from industrial strength aluminum, weighs 10 oz and the lanyard has a 35# break strength.





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Aircraft Procedure: Failure of Canopy to Open.

(file in Aircraft POH)

A Canopy Breaker Tool provides an emergency method of exit from the aircraft when all normal and emergency procedures for opening the canopy fail. The tool has a short blade and a heavy cylindrical handle. The Canopy Breaker Tool is securely stowed below the canopy rail in the cockpit, and the handle is attached to a pin and lanyard secured to the aircraft frame and has a pull ring on the pin. The tool can be removed by grasping the handle with one hand and pulling the release pin with the other hand.

If the normal or emergency procedures for opening or removing the canopy fail, proceed as follows:

1. Remove Canopy Breaker Tool by grasping the handle of the tool with one hand and pulling the release pin with the other hand, and removing the red plastic cover over the blade.
2. Grasp Canopy Breaker Tool with one hand firmly wrapped around it, with the cutting edge of the blade facing up and parallel to the canopy.
3. Grasp the bottom end of the tool handle with the other hand so the bottom of the handle rests against the palm of the hand.
4. Aim the blade point to strike the canopy surface parallel to the frame and near the canopy support frame, using body motion in strong upward thrusts.

NOTE

The blade of the tool should penetrate through the canopy and produce cracks leading away from the penetration point. Approximately four to five blows, placed so that the cracks from the previous blow intercept, are necessary to open a hole large enough for escape. The approximate time to open an initial escape hole is 7 to 10 seconds.



Secure Lanyard To A Fixed Structural Member Inside The Aircraft – frame, seat, etc. within arm's reach.