# 2016


# Emergency Extraction Procedures

This document is intended to be a guide for emergency personnel when responding to an emergency or accident involving Sean D. Tucker and the Oracle Challenger III biplane. This aircraft **does not** have an ejection seat or any type of explosive system to jettison the canopy that responders need to be aware of. Everything is accomplished manually.


Upon reaching the aircraft in the event of an incident the steps to be followed are:

1. Open the canopy
2. Shut off the engine (if necessary)
3. Shut off the fuel
4. Shut off the smoke system & electrical power
5. Jettison the canopy (if necessary)
6. Release the safety belts
7. Disconnect the helmet
8. Extract the pilot

# 1. OPEN / BREAK THE CANOPY

The canopy on the Oracle Challenger III is opened by rotating a **SMALL SILVER LEVER** that is located on the left side of the canopy (figure 1)

In the event that the canopy cannot be opened, sharp blows from a heavy object should break the plexiglass.

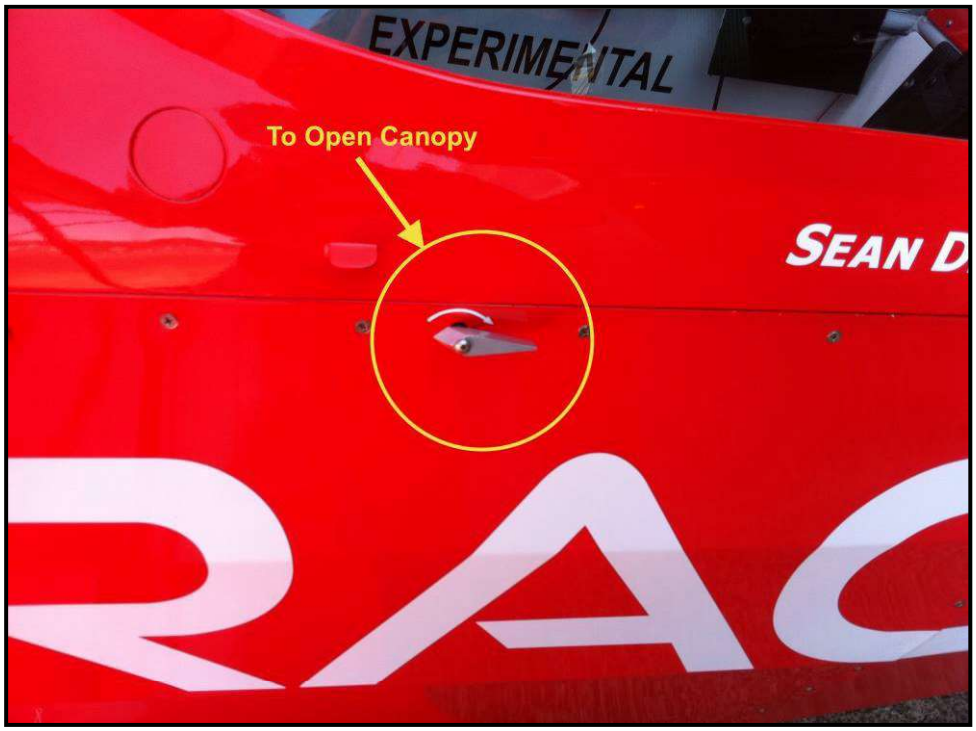


**Figure 1 - Canopy Release Lever**

When the canopy is **LOCKED**, the lever will be in the streamlined position, pointing fore and aft. (Figure 2)

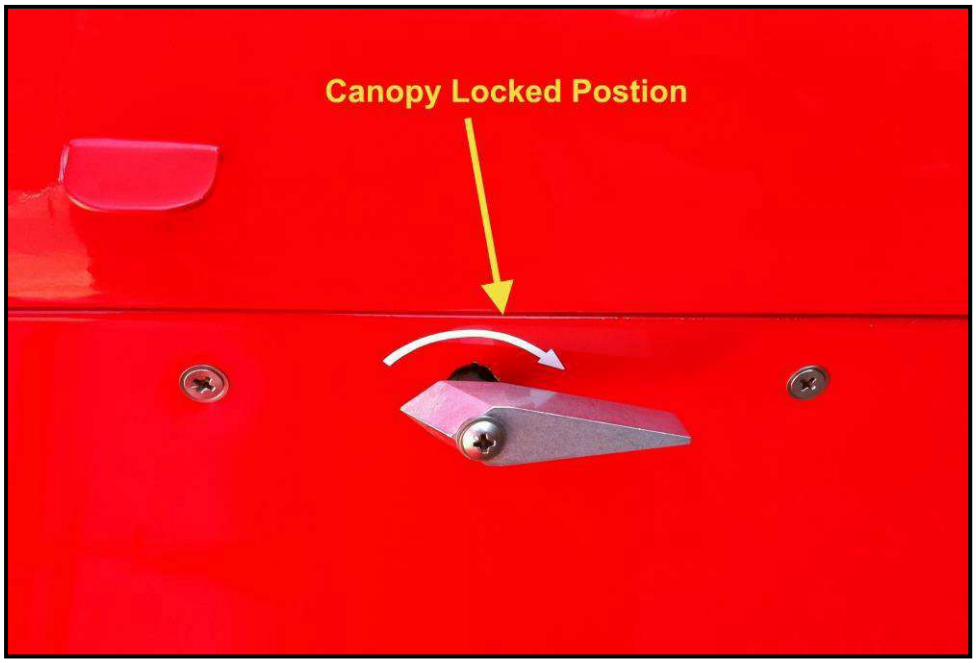


**Figure 2 - Canopy LOCKED Position**

To **UNLOCK** the canopy, the lever must be rotated **CLOCKWISE** so that it is pointing straight UP & DOWN. (as depicted by the arrow painted above it.) (Figure 3)

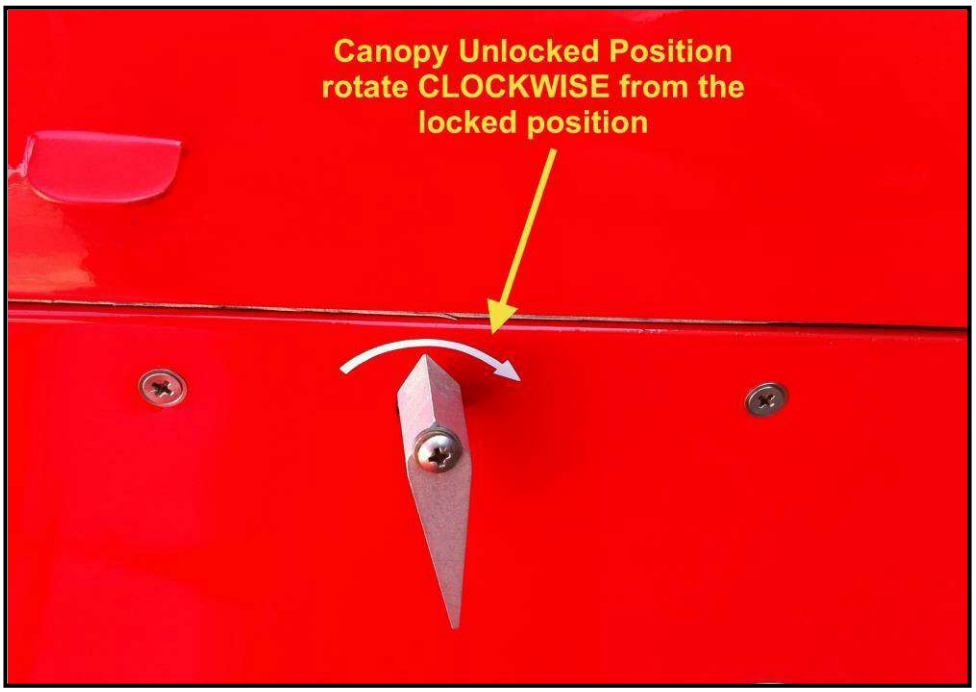


**Figure 3 – Canopy UNLOCKED Position**

## 2. SHUT OFF THE ENGINE

Once the canopy has been opened, it will be necessary to shut off the engine if it is still running.

To shut off the engine, you will need to pull the **RED MIXTURE KNOB FULL AFT**. This is accomplished by pressing in on the **CENTER** of the knob and pulling it **AFT.** This will immediately cut-off the flow of fuel to the engine. Once you have done that, pull the **SILVER THROTTLE KNOB FULL AFT.** (figure 4)

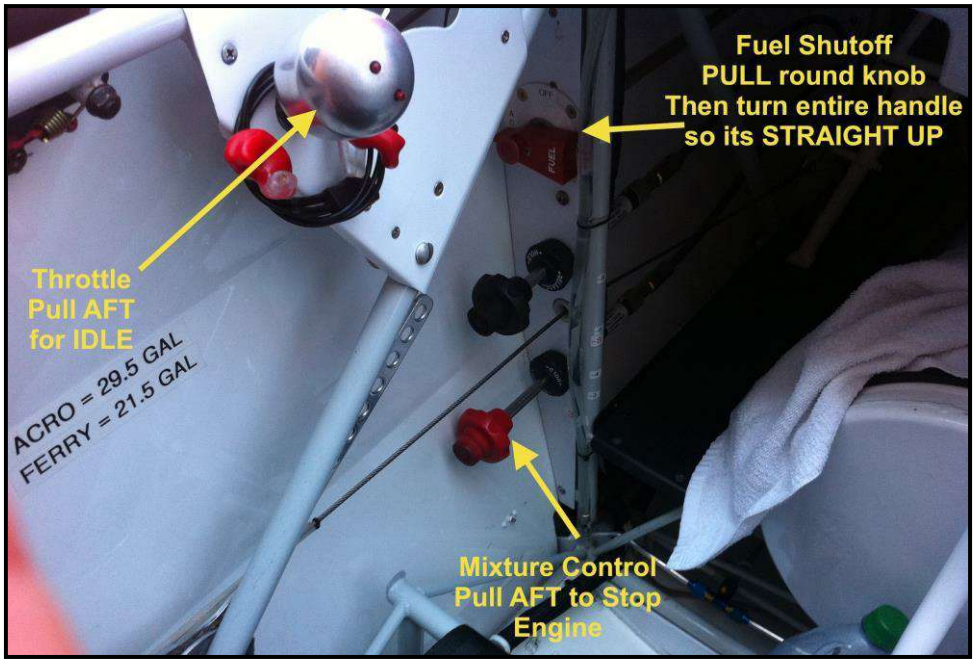


**Figure 4 - MIXTURE & THROTTLE knobs**

Additionally, you will need to turn off **BOTH MAGNETO SWITCHES**. This is accomplished by making sure that they are in the **DOWN** position. If for some reason pulling the mixture **AFT** does not shut off the engine, turning the magnetos off will. (figure 5)

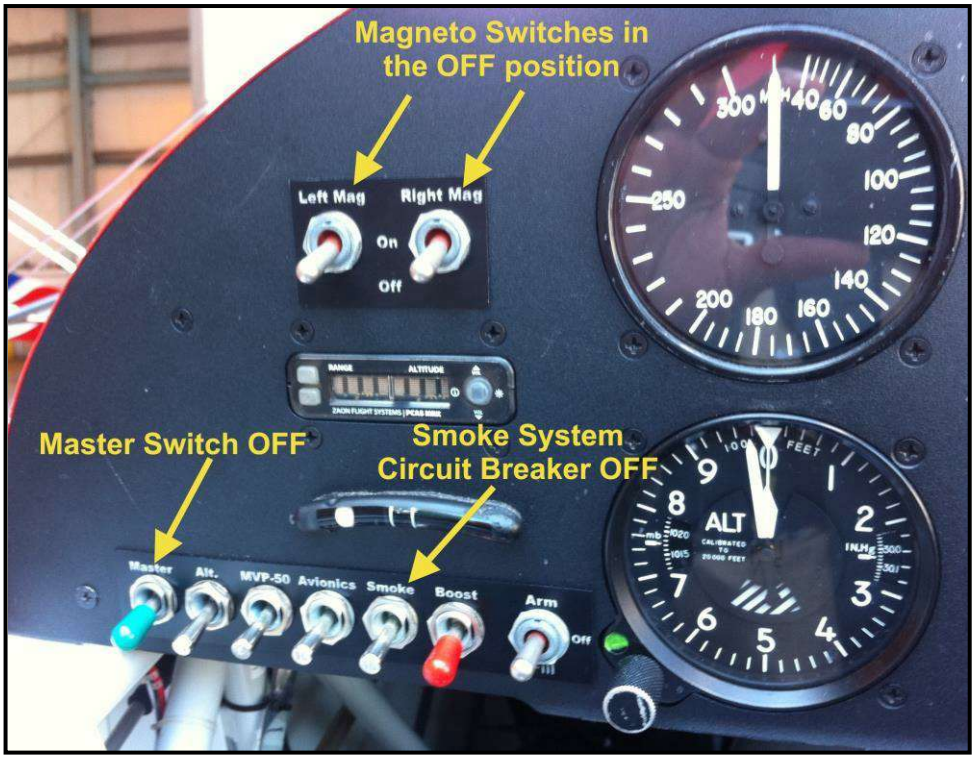


**Figure 5 - MAGNETO switches**

## 3. SHUT OFF THE FUEL

Once the engine has been secured, you will need to shut-off the fuel supply.

To **shut-off** the **FUEL SUPPLY**, you will need to locate the **FUEL SHUT-OFF KNOB**. It is located **below** the instrument panel on the **left side** of the cockpit. It is a **RED, TRIANGLE-SHAPED** knob that has a **ROUND RED BUTTON** on the end of it.

To **shut-off** the fuel supply, you will need to **simultaneously LIFT** the **RED BUTTON** while turning the entire knob **CLOCKWISE** until it is pointing **STRAIGHT UP.** You will the **ROUND RED BUTTON** fall into a detent. (figure 6)

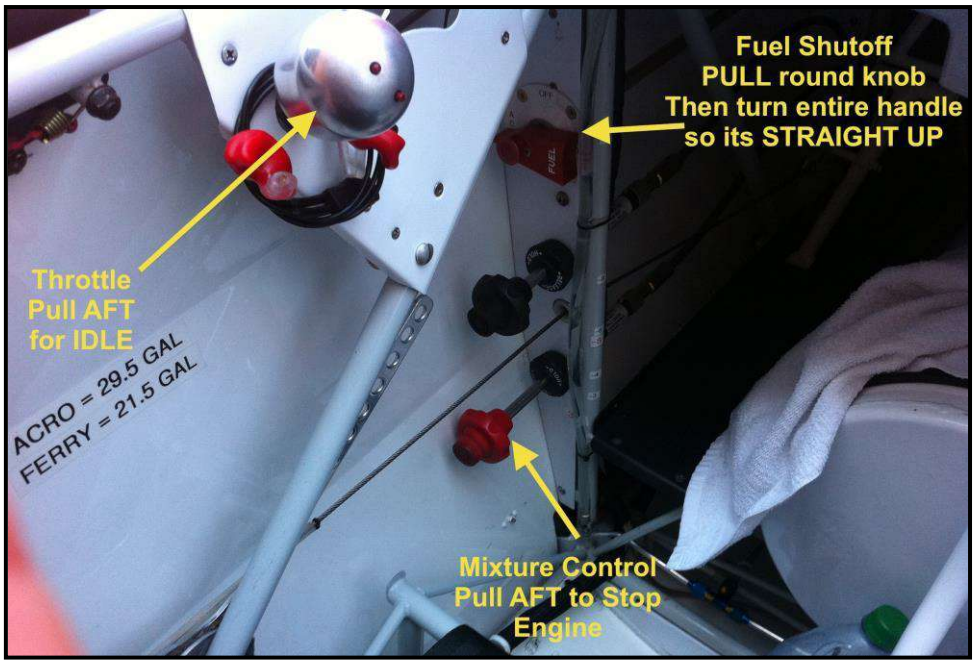


**Figure 6 - FUEL SHUT-OFF**

## 4. SHUT OFF THE SMOKE SYSTEM & ELECTRICAL SYSTEM

You will next need to shut off the **ELECTRICAL SYSTEM and the SMOKE SYSTEM.**

This is most easily accomplished by **TURNING OFF** the **MASTER SWITCH** and then the **SMOKE SYSTEM CIRCUIT BREAKER**. (figure 7)

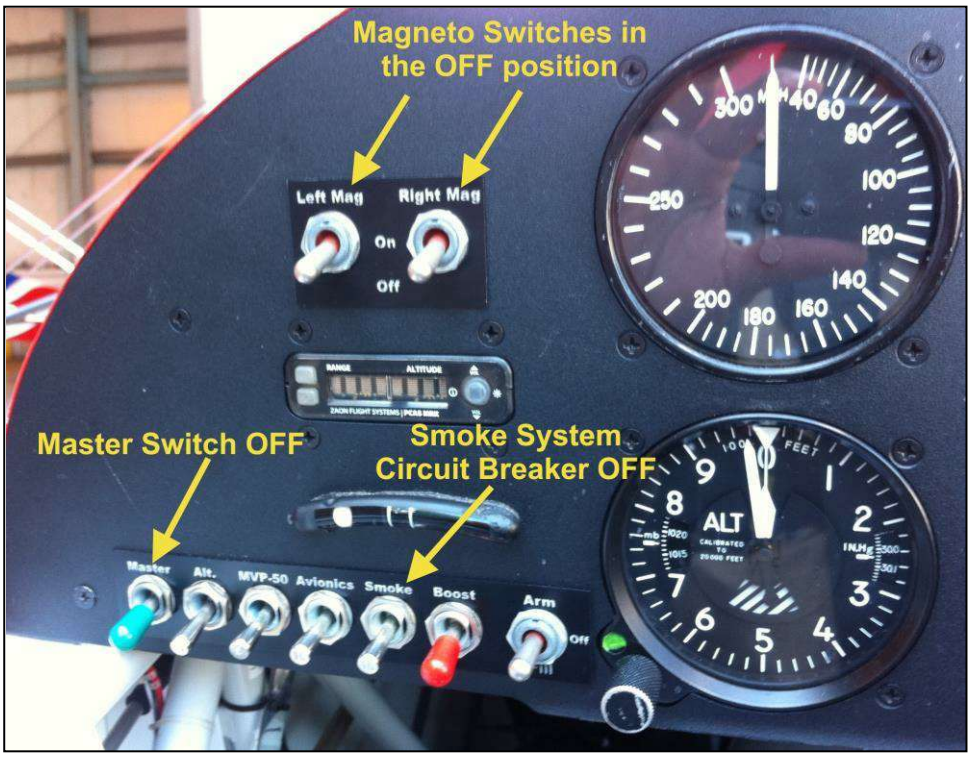


**Figure 7 - MASTER & SMOKE SYSTEM switches**

## 5. JETTISON THE CANOPY

If necessary, the canopy can be fully removed from the aircraft.

This is accomplished by locating the **RED & BLACK, T-SHAPED HANDLE.** It is located **below** the instrument panel on the **right side** of the cockpit.

To **JETTISON** the canopy you will need to **PRESS IN** on the **SILVER BUTTON** on the **CENTER of the handle** and then **PULL THE HANDLE FULL AFT**. This will release the locking pins and allow the canopy to be removed. (figure 8)

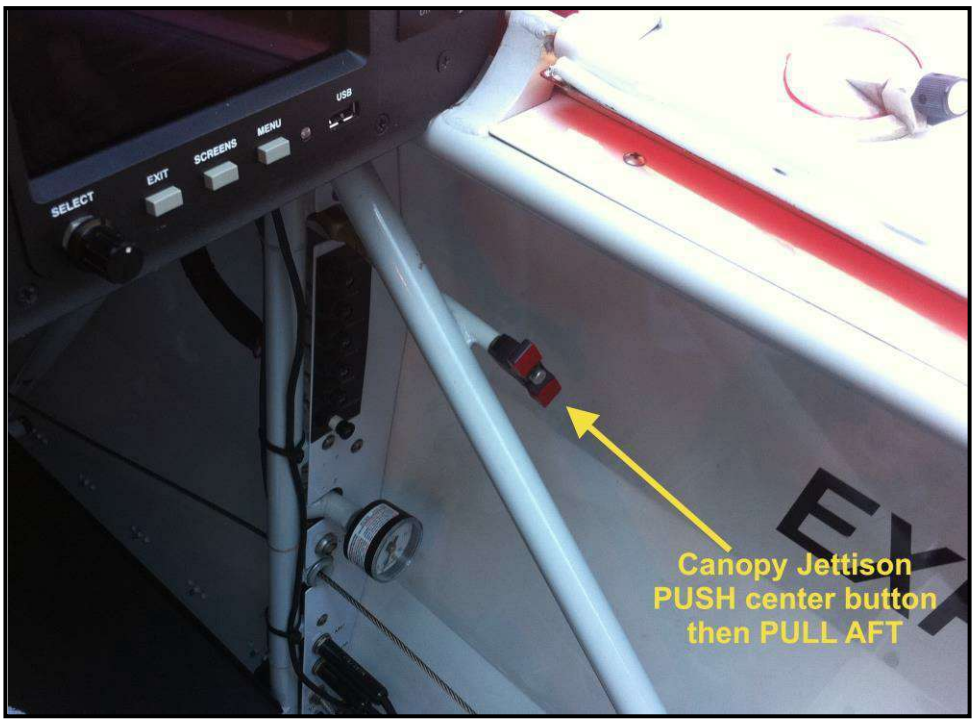


**Figure 8 - CANOPY JETTISON**

## 6. RELEASE THE SAFETY BELTS

The Oracle Challenger III is equipped with **TWO SEPARATE** sets of safety belts.

The first set is a **5 POINT SAFETY HARNESS** made up of a lap belt, shoulder straps and a crotch strap.

The other is a secondary **LAP BELT**.

In order to remove the pilot from the aircraft you will have to **RELEASE** the **LATCHES** on **BOTH** of the belts.

The **5 POINT SAFETY HARNESS** has a **SINGLE LEVER** that must be **LIFTED** in order to release all 5 pieces of the harness

The **SECONDARY LAP BELT** has a **METAL TAB** on the **BUCKLE** that must be **LIFTED** in order to release both sides. This buckle is identical to the ones used on seat bets used by the airlines. (figure 9)

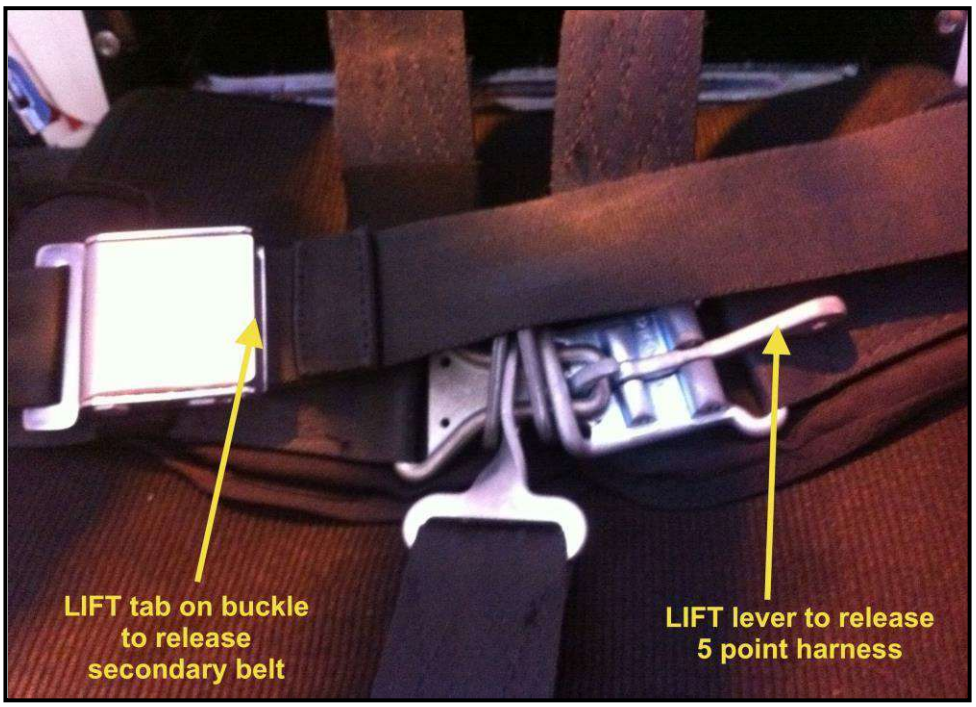


**Figure 9 - SAFETY BELTS**

## 6. DISCONNECT THE HELMET

Before removing the pilot, you will need to **DISCONNECT** his helmet.

This is accomplished by **DISCONNECTING** the **PLUG** at the end of his **HELMET CORD** from the **RECEPTACLE** which is located on the right **side** of the cockpit just **below** the **canopy. (figure 10)**

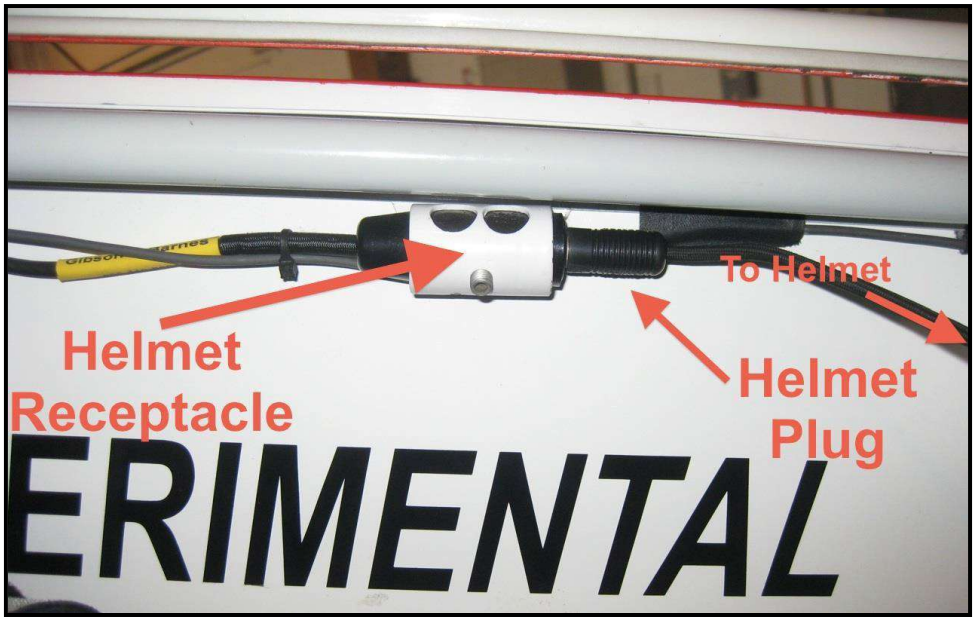


**Figure 10 - HELMET JACK**

## 7. EXTRACT THE PILOT

Once you have reached this point, the pilot can be removed from the aircraft.

Once assessing the situation, it will be up to the first responders and EMS to decide the best method for the extraction.

Keep in mind that the pilot will be wearing a helmet and a parachute. It is probably best to remove him from the aircraft while still wearing this equipment. To do otherwise would take extra time and cause excessive movement, which could cause additional injuries.

**NOTE:** If you or any member of your team is unclear about **ANY** of these procedures, please contact our Operations Coordinator, John De Gennaro, at and he will clarify any details.

We also strongly encourage you to set up a meeting between John De Gennaro and your EMS and Rescue Personnel prior to your event so that he can demonstrate, in person, all of the procedures detailed in this document.