August 22, 2016 **Memo #0047**

Teams will be required in the Safety Inspection prior to competition to show that the fire extinguisher is able to be operated in order to receive their Technical Safety Sticker.

SPA Fire System Procedures



The SPA Fire System Mandatory Procedures

The SPA Fire System utilizes electrically triggered mechanical actuators located within the rotating head of the pressurized container. The actuator manually opens a diaphragm allowing the pressurized extinguishing agent to flow from the bottle, through the tubing and out the supplied nozzles.

The actuator triggers remotely utilizing a current release from a 9 volt battery-powered Power Pack. The actuator inside the fire bottle head is designed to fire from a single manually activated push button or if two firing buttons are used they are wired in series.



Hirschman Power Pack

The fire extinguishing system wiring, fire extinguishing system activation and fire extinguishing battery test electronics are integrated into the red Power Pack located beside your driver's right shoulder. The driver head protection unit must be removed to gain access to the controls of the Power Pack.

The Power Pack electronics can test the continuity of the wiring, and also provide a high current pulse test to ensure system is functional without discharging the fire suppressant liquid inside the fire bottle.

Confirming System Integrity

Unlike other systems, the battery test will not destroy or put an excessive drain on the system battery during this critical test.

These critical tests are performed using the three-way switch on the Power Pack box, and should be performed before each on-track session and tested again after each session.

Since the system is only as good as the battery that powers it along with the integrity of the wiring loom and its tubing connectors, each component must be checked prior to every on-track session, and the Power Pack must be activated for use before the driver is seated in the cockpit. After each session, the system should be tested and then the Power Pack toggle must be moved to the correct deactivation position until the next session.

To check the condition of the battery, move to and hold the three way switch on the Power Pack box into the **Battery Check** mode position (top position). Every two seconds you will see a light flash. If the light flashes very dimly the battery must be replaced.

IF IN DOUBT, REPLACE THE $1.00 BATTERY!

To replace the battery, simply disconnect the screw on the Hirschman electric connector, remove the Power Pack box from the car, remove the four "+" screws on the face of the Power Pack box, open the lid and remove and replace the standard 9 volt battery and reassemble.

To check the Continuity of the Wiring, first ensure that the switch on the power pack box is in the **SYSTEM INACTIVE** position (Middle position). This will ensure that the extinguisher actuators are not fired.

Press the internal or driver firing button that is inside the cockpit and check that the RED light on the Power Pac comes on. Then press the external or corner worker firing button, if one is present, and check that this also makes the RED light come on.

To activate the fire system place toggle switch in the **SYSTEM ACTIVE** position. In this position, if either of the firing buttons is depressed, the extinguishing agent will be discharged.



Hirschman Power Pack

To check the condition of the Fire bottle, you will need to remove the steering wheel, the seat assembles and then remove the rectangular 45 degree angled CF panel behind the seat.

Confirm by **Visual Inspection** that there are no scratches or gouges on the bottle. Any damage to the bottle would cause an automatic failure at tech inspection.

Confirm that the **Bottle Gauge** shows that the bottle is within operational pressure capacity.

Confirm by **removing the bottle from its holder and completing a Visual Inspection** that there are no bent broken or cracked components on the fire extinguisher mount.

Confirm that your **Inspection Tag** shows that your bottle is within the series serviceability time and that the **Inspection Tag** is visible when the bottle is assembled

On reassembly, confirm that the bottle is connected **Electrically** and that the **Tubing Connector** at the head is secure. Rotate the bottle to a position that will allow **Visual Inspection of the Gauge** located on the bottle while in tech.



