



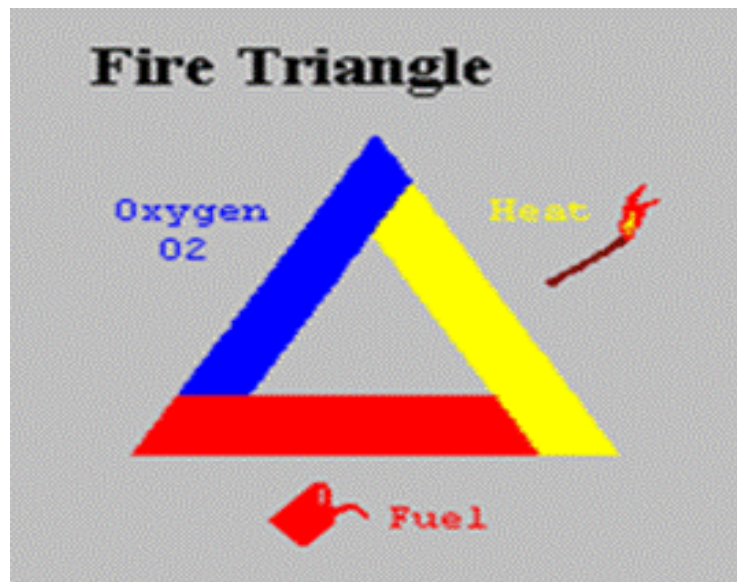
## VIRGINIA FLIGHT SCHOOL SAFETY ARTICLE – NO 14/08

### AIRCRAFT FIRES

The article hereunder pertains specifically to general aviation aircraft.

### ELEMENTS NECESSARY FOR A FIRE

The fire triangle illustrates that for a fire to ignite and burn three elements viz fuel, source of ignition and oxygen are necessary. A fire will occur when the elements are combined in the right mixture.



### FIRE PREVENTION/RETARDATION

A fire can be prevented or extinguished by removing any one of the three elements.

Fuel. (Combustible Material) Without fuel a fire will stop. Fuel is removed by either exhausting the supply – combustible material burns out or by removing/altering the source of the fuel so that it will not burn e.g. fire retardant upholstery.

Heat or Source of Combustion. Without sufficient heat a fire cannot begin or continue burning. Removing the heat source such as dousing the base of the fire or switching off the electrical supply in the case of an electrical fire will stop the fire.

**Removing the Oxygen.** When combating a fire, oxygen is usually removed by “smothering” the source of the fire with an aqueous foam, inert gas such as CO<sub>2</sub> or dry chemical.

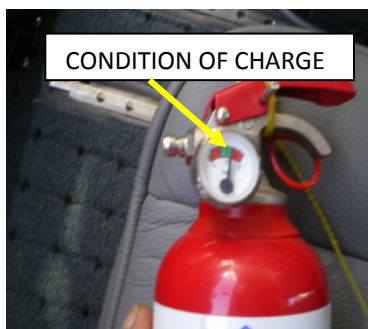
One should refer to the aircraft type’s emergency notes section of the Operator’s Handbook for specific fire combating procedures for type.

### AIRCRAFT HANDHELD FIRE EXTINGUISHERS

A hand held fire extinguisher is simply a vessel from which is expelled an agent to extinguish a fire. The agent acts to remove the heat by cooling the fuel or to produce a barrier between the fuel and the oxygen supply in the surrounding air thus breaking the fire triangle. SA CAA AIC 64-6, 04-01-23 provides guidelines for hand held aircraft fire extinguishers.

### HAND HELD FIRE EXTINGUISHER CHECKS

When checking for serviceability of hand held fire extinguishers not the following :



### Hints.

- Direct the discharge at the source of the fire as far as practically possible.
  - Do not direct the initial discharge at the source of the fire at too close a range as the high velocity stream from the extinguisher may cause splattering or dispersing of the burning Material causing further fire sources.
-