



VIRGINIA FLIGHT SCHOOL SAFETY ARTICLE – NO 15/08

CARBON MONOXIDE POISONING

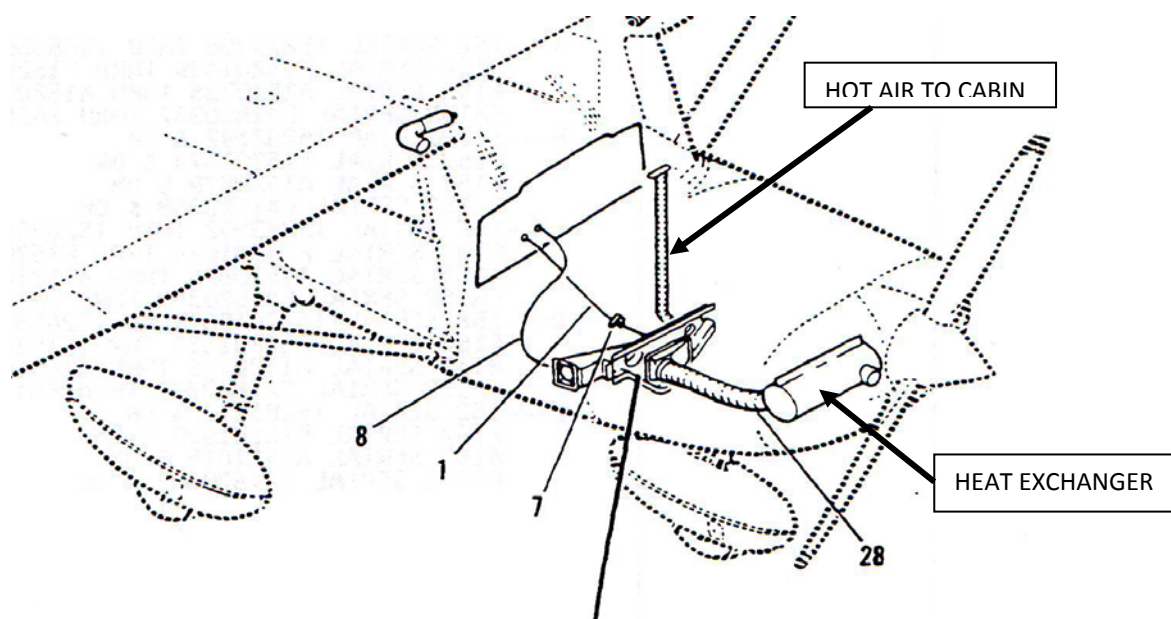


WHAT IS CARBON MONOXIDE (CO) POISONING?

Co is a tasteless, colourless and odourless gas that is a by product of the combustion of organic hydrocarbon based fuel sources. It is one of the many gases that make up the exhaust from aircraft

HOW DOES CO ENTER THE AIRCRAFT?

CO is most likely to enter the aircraft via a defective heater. Exhaust gases are mixed with the air being heated and enter the cabin. The exhaust muffler has a shroud (heat exchanger) around it. Free air enters the heat exchanger where it is heated by the hot exhaust muffler. The heated air is directed to the cabin for cabin heating and to the carb for carb heating.



When the integrity of the exhaust pipe (cracks, corrosion, etc) is compromised, exhaust gases leak into the heat exchanger and enter the cockpit through the heating system. This can even happen when the heater is “off” as it is not airtight.

EFFECTS ON HUMANS

CO can cause hypoxia which is the condition where there is insufficient oxygen in the blood for effective bodily functioning.

The symptoms for CO poisoning are as for hypoxia :

- Initial headache and nausea.
- Prolonged exposure – muscle weakness, shortness of breath, hyperventilation, dizziness, confusion and drowsiness.
- Increased fatigue, irritability, impaired judgement and changes in heart rhythm.
- Severe exposure – unconsciousness and death.

COMBATING CO POISONING

- Be aware of the symptoms of CO poisoning.
- Refer to the CO detector regularly.
- If detector changes colour – land ASAP
- In the meantime ventilate cabin and ensure cabin heat is “off”.

CO DETECTORS

All light general aviation aircraft should have a simple CO detector installed. It is a small, affordable device that may be stuck onto a prominent position in the cabin. It is chemically sensitive to the presence of CO and changes colour with the presence of CO.

