



C&D ASSOCIATES, INC.
302 POST RD.
BUCHANAN, MI 49107
PHONE: 269-695-7469
FAX: 269-695-6004

Carbon Monoxide - IS IT AN ISSUE?

Combustion heaters will not cause carbon monoxide poisoning in flight. Heat muff style heaters will cause carbon monoxide poisoning!

Muff style cabin heaters (primarily in single engine aircraft) have played an important role in creating the myth that combustion heaters (primarily used in twin engine aircraft) cause carbon monoxide poisoning.

There is a large difference between the operating principals of a muff heater and that of a combustion heater. Both have sealed, air tight chambers separating cabin heated air from poison carbon monoxide and they both provide heat for the cabin but the similarity ends there.

Muff heaters draw heat from the engine exhaust muffler. The engine exhaust gas leaving the engine cylinders collect in the same muffler used to heat the cabin. The engine exhaust muffler is designed to create some back pressure of the engine exhaust gasses resulting in much higher pressure in the chamber. In the event of a crack in the exhaust muffler chamber the high-pressure toxic carbon monoxide poison from the engine exhaust passes from the inside of the chamber to the outside. The poison carbon monoxide then mixes with the lower pressure ventilation air passing over it. The heated poisonous air then travels through the ducting into the cabin.

Combustion heaters are completely separated from the engines. It is a self-contained unit that generates its own heat from an internal combustion chamber. The combustion area within the burner chamber is always of lower pressure than the ventilation air around its outside. Low pressure is maintained by an exhaust pipe from the burner chamber extending out of the aircraft fuselage and into the air stream creating a vacuum. Higher pressure ram air scooped in from outside the fuselage or pressurized air from the pressurization system flows over the outside of the sealed chamber providing heated air for the cabin.

With the aircraft in flight the higher pressure ventilation air flows over the sealed burner chamber producing heated air for the cabin. In the event of a leak in the combustion chamber the higher pressure ventilation air will travel into the chamber and out of the exhaust sending the deadly gases safely away from the aircraft occupants.

Combustion heaters will not cause carbon monoxide poisoning to occupants of an aircraft in flight.

sandy@aircraftheater.com