

ditional method of negative pressure smoke ejection was not attempted due to the number of exits that were opened. In all tests conducted using PPV, this method has proven superior to negative pressure ventilation technique.

STAFFING

Adequate staffing to use available ventilation resources are needed to successfully accomplish aircraft interior ventilation. If advance warning is given by Air Traffic Control (ATC) of an incoming aircraft with a fire on board or a "smoke in the cockpit/cabin" emergency, sufficient mutual-aid and/or on airport resources may be available to meet the aircraft when it lands to rapidly begin ventilation procedures. If the incident suddenly occurs on the airport, inadequate resources may not be available.

Many certificated airports do not provide essential staffing. The FAA does not mandate ARFF staffing levels at U.S. certificated airports in FAR part 139 to be able to perform this crucial firefighting operation. Like structure fires, on aircraft accidents where the aircraft landed or was at the airport when a fire occurred in the cabin or cargo hold, most passenger/crew fatalities occurred due to smoke inhalation.

PLATFORM FOR VENTILATION

Aside from staffing, another problem of getting a fan/blower into position to ventilate the interior of an aircraft without obstructing an egress point has also been identified. Placing a blower for PPV on the wing of the aircraft is least effective because it is not use a large opening on most aircraft. (You wouldn't want to blow air through a straw?) One of the larger door openings at either end of the fuselage needs to be used. Many certificated airports that provide service for large passenger/cargo aircraft and have sufficient ARFF staffing are now using a stair vehicle for firefighters to ingress aircraft (*PHOTO TOP*). This type of vehicle is very effective for providing airport firefighters a platform to use for smoke ejectors and other PPV equipment. The NFPA recently acknowledged *the significance for this vehicle in ARFF by adding a new chapter for "Aircraft Interior Access Vehicles"* to NFPA 414-*Standard for Aircraft Rescue Fire Fighting Vehicles-2007*.

CONCLUSION

Effective aircraft interior ventilation SOPs need to be developed for each ARFF department based on their staffing and available resources. Training must be conducted to measure the timeliness of tactical ventilation techniques. There have been many incidents in the past where rapid interior ventilation in concert with effective interior fire suppression may have saved lives. We must not overlook these incidents. We must use them as lessons learned to better understand these tragic incidents and see to it that we are better prepared to provide critical life saving ventilation techniques to do our jobs more effectively.

