

REGIONAL STANDARD OPERATING PROCEDURES

Aircraft Emergencies

#: 107.09

REV: 11/2016

PURPOSE:

The purpose of this procedure is to establish guidelines for the response of fire personnel and equipment to off-airport aircraft emergency situations. For on-airport aircraft emergencies at Sierra Vista Municipal Airport/Libby Army Airfield, the Fort Huachuca Fire Department shall be the lead agency, with other area agencies participating in a support role.

GENERAL AVIATION FIRE FIGHTING RESPONSE PLAN:

Since an aircraft crash can occur anywhere in the greater Sierra Vista area, off-airport units need to be versed in some basic tactical considerations and guidelines when dealing with aircraft crash incidents.

There are two types of aircraft crashes: 1. High Impact 2. Low Impact

TACTICAL BENCHMARKS:

The following are tactical benchmarks to consider for any type of aircraft accident -

1. The first arriving unit should assume command and determine if the pilot/flight crew has initiated emergency evacuation procedures. Whenever possible, establish communication with the pilot, approach in full view of him/her and follow his/her directions.
2. If emergency evacuation is in progress, assist evacuation of crew and/or passengers and/or provide them a path of egress, by discharging Class B foam from apparatus. Create a path through the burning flammable liquid from the escape exit door to a safe area. If Class B foam is not available, use large volumes of water. Protect the aircraft fuselage from direct flame impingement since fire can burn through fuselage within 60 seconds. Ensure a continuous water supply is established. Master stream appliances utilizing fog patterns provide quick water in large volumes to protect passengers during evacuation.
3. Deploy attack lines to the aircraft's interior, without inhibiting passenger egress. Fire intensity may require the use of 2 ½" hand-lines, utilizing fog patterns.

4. Provide interior ventilation as soon as possible inside the aircraft. Fatalities in survivable aircraft crashes are usually due to smoke inhalation. Use wide angle fog patterns from hand-lines to ventilate. Positive Pressure Ventilation (PPV) is beneficial, however may not be initially expedient. Ventilation should be coordinated with water application/suppression efforts so as not to increase fire intensity.
5. Large fixed-wing aircraft have common attic spaces, large open cargo areas (in belly), and sidewalls that can have running fires in these confined spaces. Consider using piercing nozzles to reach fire in confined spaces or any location where interior attack lines cannot be deployed.
6. Some aircraft may require the use of ground or aerial ladders to reach access points.
7. Obtain primary and secondary all clears. Never assume absence of survivors.
8. Provide for interior and exterior lighting.
9. Request law enforcement to secure the scene and, if needed, provide a holding area to assist in the control of ambulatory passengers.
10. Establish both fire attack and medical groups as soon as possible. Assign groups to address scene lighting, extrication, treatment, transportation and site safety.
11. Depending on the scope of the incident, consider establishing a branch level command system to address Fire and Medical Operations separately.
12. Ensure necessary amounts of foam extinguishing agents to amounts of flammable liquids on fire. ARFF trucks from Fort Huachuca Fire are capable of discharging large quantities of Class B foam and will be included in response plans for off-airport aircraft emergencies.
13. Maintain an effective foam blanket to prevent ignition / re-ignition of fuel.
14. Maintain awareness of electricity and hydraulic energy generated by large aircraft, which can seriously injure personnel and/or ignite fuel sources.
15. Maintain awareness of and avoid engines (especially air-intake and exhaust areas), propellers, and rotors.
16. In rotary-wing aircraft emergencies never approach the aircraft from the uphill side or from the rear/tail-rotor side. In a high impact crash the aircraft will typically be on its side and the main rotors will typically be at rest and/or damaged due to impact. Approach from the belly side of the aircraft and keep close to the fuselage.
17. There are emergency shutdown procedures for rotary wing aircraft fuel systems and rotors that are specific to each aircraft manufacturer and model. It is imperative that our

personnel maintain an awareness of these procedures specific to the aircraft commonly flown in our area, so as to possess the capability to perform these procedures in the event of a crash in which the pilot and/or crew is incapacitated.

18. Jagged metal from aircraft can cut through protective clothing and hose lines.

19. To gain access into the fuselage, it may be necessary to use the wing area or a platform ladder truck to work from. For fixed-wing aircraft, the optimum place to cut is around windows and roof area. Hydraulic powered tools and pry bars do not work well on aircraft metals due to the lack of solid supports to work against.

20. If saws are used for extrication or ventilation, arcing and sparking will need to be suppressed with water/foam from hand lines. Maintain integrity of foam blanket on flammable liquids. Be aware that many aircraft have numerous high pressure hydraulic lines that operate at 3000 psi; these can cause serious injury if cut or broken under pressure.

21. Ensure back-up crew(s) with charged hose lines are in place to protect all personnel who will be working inside the spilled flammable liquid areas. All personnel near the aircraft shall be in full PPE and SCBA. Military aircraft are often constructed of/contain carbon fibers and other hazardous materials, so a serious respiratory exposure hazard exists even when no fire or smoke is present.

22. Have law enforcement secure a route of ingress / egress to permit emergency units unimpeded movement to / from the incident.

23. Aircraft may have oxygen or other compressed-gas cylinders on board that can explode, become missiles, and/or accelerate the spread of fire.

24. Adopt a defensive mode of operation, as needed, to protect personnel and exposures.

25. Ensure that Dispatch notifies the National Transportation Safety Board (NTSB) and County Office of Emergency Management.

26. Do not allow any overhaul operations to take place until all investigative agencies are finished or unless needed to rescue victims or suppress fire.

27. For incidents involving military aircraft, ensure that Dispatch notifies FHFD.

28. Some military aircraft may deploy flares during an aircraft emergency, Utilize a straight or narrow water stream from a large hand line or master stream appliance to sweep flares away from the aircraft prior to approaching it.

29. The vast majority of military aircraft flown in our area do not have munitions on board, however if what appears to be munitions are present, it is best to await the arrival of FHFD personnel before approaching the aircraft.

30. Have a FHFD representative report to the Command Post along with active duty military liaison (if applicable), and any other agency that can assist with the incident. Consider establishing a Unified Command. Consider standing up the Emergency Operations Center (EOC).