

3.5.3.7 Aircraft Extrication



YOUR ORGANIZATION
STANDARD OPERATING PROCEDURES/GUIDELINES

TITLE: Aircraft Extrication

SECTION/TOPIC: Special Rescue Operations

NUMBER: 3.5.3.7

ISSUE DATE:

REVISED DATE:

PREPARED BY:

APPROVED BY:

X

Preparer

X

Approver

These SOPs/SOGs are based on FEMA guidelines FA-197

1.0 POLICY REFERENCE

CFR

NFPA

NIMS

2.0 PURPOSE

This standard operating procedure/guideline addresses extrication of patients from aircraft; may include information on equipment use and maintenance.

The purpose of this procedure is to establish guidelines for the response of fire department personnel and equipment to aircraft emergency situations occurring at the International Airport. The procedure outlines responsibilities for both on and off airport fire personnel and details dispatch terminology, apparatus response, standby locations, and staging areas.

3.0 SCOPE

This SOP/SOG pertains to all personnel in this organization.

4.0 DEFINITIONS

These definitions are pertinent to this SOP/SOG.

5.0 PROCEDURES/GUIDELINES & INFORMATION

5.1 Extrication of Patients from Aircraft:

DISPATCH TERMINOLOGY

Aircraft emergencies are broken down into three categories: Alert 1, Alert 2 and Alert 3. These categories are defined by the Federal Aviation Administration (FAA) to provide standard descriptions and terminology for aircraft emergencies.

Alert 1: Indicates an aircraft is having minor difficulties (i.e., minor oil leak; one engine out on a three or four-engine commercial aircraft or one engine out on a two-engine general aviation aircraft; fire warning lights; etc.). A safe landing is expected.

Alert 2: Indicates that an aircraft is having major difficulties (i.e., a positive indication of fire on board the aircraft; faulty landing gear; no hydraulic pressure; engine failure on a two-engine large aircraft; etc.). A difficult or crash landing may be expected.

Alert 3: Indicates that an aircraft has crashed on or off the airport, or there is a high probability the aircraft will crash, or the pilot has indicated that the aircraft landing gear will not work and, therefore, the pilot will have to crash land on the airport.

AIRPORT RESPONSE - AVIATION EMERGENCIES

The type of fire department response at the Airport will be dictated by a fire captain at Airport Fire Station #xx. The captain will assess the information he/she has received from the FAA Control Tower or other source, and direct fire Dispatch to send the appropriate level of alert response.

In all cases, the captain will take a pessimistic view and select the alert level most appropriate for the expected problems.

An Alert 1 response consists of: Foam 1, Foam 2, Foam 3, Attack 19, E19 and BC19.

An Alert 2 response consists of: Foam 1, Foam 2, Foam 3, Attack 19, E19, BC19, one off-airport engine company (which will be A.L.S.), one ladder company.

An Alert 3 response consists of: Foam 1, Foam 2, Foam 3, Attack 19, E19, BC19, four off-airport engine companies (two of which will be A.L.S.), Support 8, two ladder companies (one will be a platform), one utility truck, one Command Van (CV-1), three rescues, and 6 additional battalion chiefs, SDC, NDC.

STAFF REDUCTIONS

Squad19/Attack 19 is the same crew with capabilities of two different apparatus. Squad 19 is a smaller more mobile unit for dispatches to medical, car fires, and special duty calls. Attack 19 is a foam truck for use with fuel spills and alerts. If Squad 19/Attack 19 is dispatched on another call, as well as E19, this causes a significant reduction of available personnel for aircraft emergencies at the airport. In this case, the alert assignment should be increased to cover for staff reductions.

RESPONSE AND STANDBY POSITIONS

On Alert 1's -- Station 19 with Foam 2 out of Station 29 will handle the emergencies along with Battalion 19, Foam 1, Foam 2, Foam 3, Attack 19 and E19, and will respond to their ARFF staging locations along the runway.

On Alert 2's -- Foam 1, Foam 2, Foam 3, Attack 19 and E19, BC19, will respond to their ARFF staging locations along the runway. Off-airport units will respond to Gate 118 - east of Fire Station 29 (3949 E. Air Lane), Level II staging.

On Alert 3's -- Foam 1, Foam 2, Foam 3, Attack 19 and E19, BC19, will respond to the crash site. All off-airport units will also respond directly to the crash site, unless Command directs them to a level two staging area -- Gate 118, east of Fire Station 29 (3949 E. Air Lane). The Battalion chief will respond directly to the crash site and rendezvous with Airport Command.

Airport ARFF staging locations in general are: Foam 3 will be near the mid-point of the runway; Foam 2 will be near east-end of the runway; and Foam 1 will be near the west-end of the runway. Attack 19, E19, BC19 will stage near the midpoint of the runway with Foam 3. Each position will be at least 500 feet away from the runway.

STAGING

The first off-airport unit to arrive at the staging location will assume staging sector responsibilities and announce "staging." Additional equipment will be assembled in an organized manner. Command may relocate staging as needed. All radio communications will use the radio designation "staging."

TACTICAL BENCHMARKS

Listed below are tactical benchmarks to consider for any type of aircraft accident in the City Regional response area.

1. The first arriving officer should assume Command and assist escaping passengers and/or provide an escape path for the escaping passengers by using foam to cut a path through the burning flammable liquid from the escape exit door to a safe area outside the burning flammable liquid. If 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. Lay your own supply line. Stang Guns provide quick water and large volume to extinguish fires and protect exposures.
2. Get an interior attack line inside the aircraft as soon as possible without interfering with the escape of the passengers. Fire intensity will require the use of 1-3/4" or larger handlines.
3. Provide interior ventilation as fast as possible inside the aircraft. Most victims who die inside survivable aircraft crashes die of smoke inhalation. Use PPV fans or fog hose streams to ventilate. Pressurize from unburned area and provide ventilation exit in fire area. Ventilation should be started at the same time as the attack lines are put into operation, if possible.
4. Aircraft have common attic spaces, large open cargo areas (in belly), and sidewalls that can have running fires in these confined spaces. Consider using penetrating nozzles to reach fire in confined spaces or any place where interior attack lines cannot be placed into position for whatever reason.
5. Use ladders at the aircraft at the wing or other accessible points. Jumbo aircraft may require aerial ladders to
6. Obtain a primary and secondary all clear.
7. Obtain an accountability report.

8. Provide for interior lighting.
9. Request that the Police Department secure the scene and assist in the control of the ambulatory passengers. Have the police provide a holding area for them until sectors can be assigned.
10. Initiate both fire and medical sectors as soon as possible. Establish sectors for both sides of the aircraft to protect the escape routes and manage the evacuated passengers. Establish sectors to address scene lighting, extrication, treatment, transportation and site safety.
11. Consider establishing a branch level command system to address fire and medical operations separately.
12. Large amounts of flammable liquids on fire require large amounts of foam extinguishing agents.
13. Keep all flammable liquids covered with a foam blanket to prevent ignition.
14. Be aware that large aircraft have enough electrical power running through the aircraft electrical lines to kill a person and/or ignite flammable liquids.
15. Jagged metal parts of the aircraft can cut through protective clothing and hose lines.
16. To cut into the fuselage of an aircraft, use the wing area to stand on, otherwise, a platform ladder truck may be necessary. The best place to cut is around windows, doors and the roof area.
17. Hydraulic tools and pry bars do not work well on aircraft metals due to the lack of solid supports to work against.
18. If saws are used for extrication or ventilation, arcing and sparking will need to be suppressed with water/foam from hand lines. A good blanket of foam must be maintained on the flammable liquids area.
19. Always have an IRIC or RIC with charged and staffed hose lines in place to protect all personnel who will be working inside the spilled flammable liquid areas. All personnel working in these areas shall be fully turned out with protective gear, with S.C.B.A. facepiece on.
20. Have police secure a route in and out of the incident site to permit easy movement of emergency equipment, particularly for rescues going to hospitals.
21. Do not allow any overhaul operations to take place until all investigative agencies are through, unless needed to suppress fire.
22. Be aware that large aircraft have oxygen cylinders on board that can explode, become missiles and/or accelerate the spread of fire.
23. Always assume there are survivors of the aircraft crash. Initiate primary and secondary searches.
24. Consider adopting a defensive mode of operation, protect personnel and exposures.
25. Have Dispatch notify the National Transportation Safety Board (NTSB) by contacting the FAA Air Traffic Control Tower at the Airport.
26. Have Dispatch notify the area hospitals, Salvation Army, Red Cross, County Emergency Disaster Coordinator, C.I.D. Team and Airport Communication Center.
27. Consider requesting airport units such as Foam 1, Foam 2, Foam 3, Medical Support 19 or Foam 34, if they have not been dispatched.
28. Have an airline representative report to the Command Post along with the liaison from the Police Department, Aviation Department, and any other agency that can assist with the incident.

5.2 Use of Equipment during an Extrication:

5.3 Maintenance of Equipment used during an Extrication: