TOLEDO FIRE & RESCUE DEPARTMENT

C-4 Aircraft Crash

Emergency Manual

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Policy/Procedure

NOTE – DUE TO THE EXTREMELY HAZARDOUS NATURE OF AIRCRAFT EMERGENCIES, CREWS SHALL TREAT ALL AIRCRAFT CRASH SCENES AS HAZARDOUS MATERIAL EMERGENCIES AND UTILIZE SCBA WHILE IN THE HOT ZONE, THROUGHOUT THE INCIDENT.

1. Away from Airport

1. The first unit arriving on scene shall establish Command and radio a scene report to Dispatch including size and type of aircraft, whether structures are involved, and whether there is fire.

2. Command shall call for additional fire apparatus, air ambulances, law enforcement, medic units, the foam unit, or other resources, as needed. See “Military Aircraft” below.

3. If there is no fire, crews shall flush spilled fuel away from the cockpit or cabin area and keep fog streams in operation while affecting any rescue. Fire personnel shall use foam on spilled fuel and the aircraft to minimize the potential of ignition. Guard against possible ignition sources.

4. The Safety Sector Officer shall establish safety zones as soon as possible.

5. If the plane is on fire, crews shall approach from the windward side using high-velocity, narrow-pattern fog streams (approx. 30o) to drive the fire away from passengers and crew, and to protect personnel operating in close proximity to the fire. Crews shall use high-velocity, narrow-pattern fog streams to push away fuel and to maintain a path for occupants until they are rescued and clear. Crews shall use foam to extinguish the fire and maintain the application of foam to guard against flashback. Call for more foam early to avoid interruption of application. Crews shall protect exposures caused by flowing fuel and dike the area to prevent fuel runoff, if necessary.

6. Command shall confirm that Toledo Fire and Rescue Department Dispatch personnel have initiated the notification process.

2. Military Aircraft

1. Some aircraft may have a 20 mm or 30 mm Gatling gun in the nose. Crews shall not approach “head on” from the nose or tail. Firefighters shall not disturb any munitions. Disturbing electronically charged shells by touch or fire may cause them to explode. Flying fragments from exploding shells may cause injury or death.

2. Some aircraft may carry Bomb Dummy Units (BDU’s) under their wings. There is an explosive charge in the nose of the BDU. When the charge strikes the ground, it causes a “shot-gun” like blast out the tail of the BDU. BDU’s between 25 pounds and 2000 pounds and are normally colored blue. Crews shall not touch, be in proximity, or allow hose and stream from striking them. Crews shall treat BDU’s as Hazardous Materials and request a military Explosive Ordinance Disposal (EOD) Team.

3. The nose may have a radar device used to detect bombsites and other aircraft. If operational, this device will cause damage to internal organs. Firefighters shall not walk within 25 feet of, or within a 45o angle of the nose. There is no reason to be in front of the aircraft at anytime. The hazards are too great.

4. Fighter aircraft carry about 3000 gallons of JP 4 jet fuel when fully loaded. Foam is the preferred agent on fuel spills and fires, but water will work if two lines utilizing high-velocity, narrow-pattern fog streams are employed to push fuel away.

5. Many military aircraft carry about 7 gallons of hydrazine for the emergency power unit (EPU). Hydrazine is a hazardous material that is extremely dangerous being flammable, corrosive, and toxic. Exposure to hydrazine may cause seizures, pulmonary edema, or induce coma. SCBA’s shall be worn in the hot zone at all times.

6. If the aircraft is still running, crews shall stay away from air intakes and exhaust areas. If a rescue is necessary, approach should be from the side(s) of the aircraft.

7. There are about 4.5 gallons/10 liters of liquid oxygen (LOX) carried on the aircraft. The vessel housing this material may BLEVE if exposed to fire.

8. The ejection seat has an explosive charge that propels the seat from the cockpit in an emergency. It takes less than one second to go through its firing sequence once the ejection seat handle is pulled. Firefighters shall not try to make entry into the cockpit unless specifically trained in military aircraft egress procedures. Disregarding this procedure could cost a firefighter his or her life.

3. Military Aircraft Approach Procedures

1. The first arriving unit on scene shall establish Command and report to incoming units, size and type of aircraft, whether structures are involved, and whether there is fire. Command shall contact

Toledo Fire and Rescue Department Dispatch personnel and confirm incident location. Dispatch personnel shall contact 180th Air National Guard Fire Department and relay this information to them.

2. Fire personnel shall approach from upwind, outside the 25-foot, 45º angle danger zone, maintaining a safe distance from the nose or tail of the aircraft, due to the weapons and radar previously mentioned.

3. Again, SCBA shall be worn in the hot zone on all aircraft fires. Fire personnel shall treat the scene as a Hazardous Materials incident.

4. The first extinguishing agent applied will be to the cockpit of the aircraft. This will protect the pilot until a rescue can be attempted. Fire personnel shall continue to apply agent to cool the cockpit until experts arrive to extract the pilot. If the pilot is out of the aircraft, fire personnel shall administer first aid. Fire personnel shall include spinal immobilization, as trauma is likely.

5. Fire personnel shall not attempt to enter the cockpit. If an attempt is made to extract pilot, the ejection seat may fire causing injury to firefighters. If the pilot can get out, he or she will. Fire personnel shall not risk their lives for a potential body recovery.

6. Command shall call for additional assistance such as additional fire apparatus, air ambulances, law enforcement, medic units, the foam unit, or other resources, as needed.

7. The Safety Sector Officer shall establish fire lines to secure the area. Fire personnel shall not remove aircraft parts from scene but shall collect parts brought by the public to the scene. Fire personnel shall record the name and phone number of anyone bringing parts to the scene, as well as the location where the parts were found. Fire personnel shall isolate contaminated individuals, initiate decontamination procedures, and provide medical attention, if necessary.

8. When applying foam to extinguish fire, crews shall use a high-velocity, narrow-pattern fog stream (approximately 30º). If water is used solely, crews shall push the fire away from the cockpit and protect the pilot. Crews shall dike flowing fuel and eliminate potential re-ignition sources.

See Also:
