



RUSSELLVILLE FIRE DEPARTMENT  
POLICY MANUAL

Policy Number:  
Section:  
Original Date:  
Revised Date:

## **PURPOSE**

The purpose of this policy is to provide information on the tactics and operations involved with responding to elevators that have stalled or mechanically failed.

It is the responsibility of all RFD personnel to be familiar with this policy and follow it consistently to ensure the safe operation and rescue of trapped occupants.

## **POLICY**

The fire department may be called to provide rescue to persons trapped inside elevator cars. The reason for an elevator becoming stuck or inoperable is usually one of the following:

1. Electrical power failure
2. Malfunction of a mechanical component
3. Activation of safety devices

Emergency situations involving elevators could include civilian(s) stuck in an elevator:

1. Who are experiencing a medical emergency
2. During a smoke or fire condition
3. Who are injured from an elevator car "free fall" in the shaft

## **Elevator Rescue Assignment**

The On Duty Battalion Chief shall evaluate incidents dispatched that may have the potential of being a rope rescue incident. Besides the BC, any company officer may call for a response for an elevator rescue in the event they find themselves in a situation requiring additional resources and expertise. The 1st alarm assignment for an elevator rescue inside the city includes the following:

- 2 Closest Engine Companies
- Ladder 1
- Battalion 1

## **Rescue Procedures**

Prior to initiating elevator rescue procedures, dispatch and on scene information should be carefully evaluated. When an alarm is received, knowledge of the type and height of occupancies in the geographical area of dispatch will indicate the probable type of elevator (hydraulic or cable), applications (industrial-commercial, apartments, multi-story office buildings, high rise, etc.), and the time of day (indicator of the potential of trapped victims).

When dispatched to an elevator rescue the following equipment should be carried into the structure by the first arriving company:

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- Hoistway Door Keys
- PPE Coat, Helmet, & Gloves
- Flashlights
- Knox Key
- Life Safety Rope
- Portable Radios
- Halligan Tool & Axe
- Short/Folding Ladder

Once Incident Command is established, and as part of the initial size up, determine trapped occupant status as soon as possible. Perform risk/benefit analysis. Tactical considerations should be based on this analysis.

Basic Tactics:

- Locate car, make contact with and reassure/triage occupants
- Attempt to call the car, cycling the controls, check to be sure the hoistway doors are closed on all floors
- Attempt to call the car utilizing the “firemen’s service” (Phase I)
- Locate the mechanical room, shut down power for 1 min., turn back on for 1 min., then re-attempt to call the car

Advanced Tactics:

- Attempt to contact the elevator emergency repair tech for info/ETA
- Shut off elevator power utilizing lock-out/tag-out procedures.
- Use the elevator key/tool, open the hoistway door, chock and determine the location of the elevator car.
- Access the occupants using proper precautions depending on the location of the car and fall hazards present. (> 3’ above or below)
- Utilize attic ladders to protect hoistway and to access occupant
- Consider placing a rescuer inside the car to assist occupants
- Consider bleeding hydraulic elevators from the machine room

**If car cannot be accessed through Advanced Tactics or a Life Threatening Emergency exists:**

Car Top access/removal:

- Safety lines and harnesses shall be utilized
- Assign an Incident Safety Officer (ISO)
- Communicate plan with occupants
- Confirm Power is shut off and lock-out/tag-out to all elevators.
- Open the hoistway doors above the stuck car, and chock doors.
- Access the car top emergency control panel by ladder as needed and shut off the power switch on top of the car.
- Open the emergency access door on top of the stuck car.
- Access occupants using 2nd attic ladder and appropriate safety lines/harnesses

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### Termination of the Rescue Operation

1. Malfunctions as a result of power outage
  - a. Ensure systems have properly reset
  - b. Verify normal operation of elevator
  
2. Malfunctions other than power outage and/or car top access removal (In coordination with building maintenance officials)
  - a. Secure all open access to the hoistway
  - b. Leave power locked out
  - c. Post "Out of Service" signs
  - d. Ensure elevator technicians have been notified

### Elevator Fires

Fires occur in elevator cars as a contents fire, these cause smoke problems on multiple floors. Fires also occur in the elevator equipment room, elevator pit, and in the cab door motors. Due to the many complex issues with fighting elevator fires and this document addressing the rescue aspect of elevator emergencies, only general causes of fire and the effects on the car will be addressed.

#### Elevator Car

Elevator car fires are rare. The cause of the fire is usually not the car itself but trash or prohibited items stored in an abandoned car. An intense fire can warp the hoistway door and expose the hallway. Damage to the guide rails and cables could place the car in danger of falling. The incident commander and safety officer should be made aware of the elevator car involvement. Precautions should be taken to protect firefighters from a possible falling car.

#### Equipment Room

When a fire occurs in an elevator equipment room, the probable seat of the fire will be the driving motor or overheated hydraulic fluid. Disconnecting the main and auxiliary power switches will stop car movement and de-energize the driving motor. Whenever possible, the use of water on elevator equipment should be avoided and dry powder extinguishers used. The removal of passengers from the shut down elevator car should be completed in a routine manner and the room ventilated.

#### Elevator Pit

Although there is little to burn in an elevator shaft, there is the presence of grease and lint. However, the main source of fuel is debris in the pit. The principal hazard of any fire in an elevator shaft is the smoke created by the fire. Smoke can cause problems by extending to an elevator car with passengers or to other levels in the multi-story building.

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If the fire is under the car, the car should be brought to the lowest landing possible to reduce the spread of smoke. If the fire is in the upper portion of the shaft, the car should be stopped and evacuated and the elevator shaft opened as near to the fire as possible. Remember, the use of water should be avoided or used sparingly and power should be shut down as soon as practical. When multiple elevators share a common shaft, all elevators in the elevator shaft involved with fire should be stopped and evacuated.

Cab Door Motor

Signs of this type of situation are the characteristic “electrical” odor in the car. Passengers should be removed from all the elevators in the bank. The elevators should be powered down and secured. The ceiling of the cab can be inspected from the ceiling hatch or by opening the hoistway doors on the floor above.

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