

WKU DFM ELEVATOR RESCUE PROGRAM

ELEVATOR FAILURE

Definition

Elevator failure is when an elevator fails to move from floor to floor or an elevator door fails to open. The elevator alarm may or may not be heard.

PROGRAM STATEMENT

It is necessary to take action when persons are trapped in an elevator or when a condition exist with an elevator which could lead to personal injury. Whenever possible, it is recommended that any evacuation of passengers from elevator cars be performed under the direct supervision of contracted elevator maintenance personnel, as they have the necessary resources and expertise to deal with the various complex hazards which may arise.

However, in the event of an emergency, time may be of the essence in evacuating passengers, and waiting for contracted elevator maintenance personnel may be impractical. Under emergency conditions, the passenger evacuation must be performed using these guidelines, and only by DFM personnel who have been trained in elevator evacuation.

Purpose

This Action Plan is to ensure safe, effective rescue of trapped personnel from elevator cars throughout WKU.

Scope

This procedure covers all elevators throughout the WKU campus.

TYPES OF EMERGENCIES

- A. Person(s) trapped in an elevator.
- B. Elevator moving without car doors fully closed.
- C. Elevator doors open on any floor without the elevator at that level.
- D. Any elevator condition or situation that, if not corrected promptly, could lead to serious injury.

EMERGENCY ACTIONS

NOTIFY THE WKU POLICE DISPATCHER OF THE NATURE OF THE ELEVATOR EMERGENCY

POLICE DEPARTMENT/FACILITIES MANAGEMENT ACTIONS:

1. Dispatch an Officer to the scene.

2. If persons are trapped in an elevator during daytime hours:

- a.** Contact the Facilities Maintenance Action Desk and advise, "We have person(s) trapped in an elevator." This will identify the call as an emergency requiring immediate attention. The Police Officer shall provide the building name, specific elevator and number of persons trapped, if known.
- b.** The Action Desk will notify the Maintenance Manager
- c.** The Maintenance Manager will dispatch in house maintenance or instruct the action desk to notify the elevator service contractor to respond.
- d.** The Action desk will notify University Police of ETA of responder.
- e.** The Officer should then communicate with the occupants in the elevator car, and inform them that they are safe and that steps are being taken to evacuate them from the elevator car. In communicating with the occupants, the Officer should determine the number of persons in the elevator and whether any of the occupants are ill or injured. If an injury is reported, the Officer should request that dispatch contact the appropriate medical response personnel. Note the location of the elevator and whether the lights are on in the elevator car. The occupants of the elevator should continually be kept informed and reassured of their safety.
- f.** The Officer should then coordinate the rescue of the occupants. The following procedures should be used to evacuate occupants from the elevator **WITH CAR AT OR NEAR LANDING**:
- g.** DFM Action Desk will notify the Service Contractor of all elevator malfunctions to request an elevator repair person be immediately dispatched to the scene.

EVACUATION PROCEDURE

1. Set the mainline "Elevator Emergency Disconnect Switch", for the stalled elevator, in the "off" position. These switches are located in specific mechanical areas, as shown in the "Elevator Emergency Disconnect Switch Manual". This step should be performed by DFM qualified Personnel only
2. Open the elevator doors by hand or using the appropriate elevator key.
3. Request that an elevator occupant set the emergency stop switch within the elevator car, to the "stop" position, if the car is so equipped.
4. Evaluate the distance between the elevator car floor and the buildings landing level. If this distance is greater than (18 Inches), do not attempt to remove any occupants from the elevator car. In this situation, it is inadvisable to remove the occupant through the elevator door opening as the excessive distance between the car floor and building landing creates a danger due to the possibility that an occupant may fall into the hoist way. Ask the occupants to remain calm within the car until an elevator maintenance person can arrive and set the car closer to the landing.

5. When the elevator car floor and the building landing is WITHIN 18 inches OF LANDING, assist the occupants in leaving the elevator car, one at a time. If the car is not level with the landing, make sure the occupants do not trip or fall while leaving the car. The use of a ladder may be required. The following methods of removing the passengers should be used:

REMOVING PASSENGERS

Opening Doors From Landing or From Inside Elevator Car

- A. Set the mainline disconnect switch for the stalled elevator in the “OFF” position.
- B. Unlock the hoist-way door at the floor nearest the stalled elevator car by means of the hoist-way door unlocking device (elevator door interlock release key), and open the hoist-way and car doors by hand. If a hoist-way door unlocking device is not available, it may be possible on some installations for a passenger to manually open the car and hoist-way doors from within the elevator car.
- C. The rescue party should enter the elevator car and place the emergency stop switch in the “STOP” position.
- D. Passengers should be assisted from the car.

Opening Doors From Adjacent Elevator Car

- A. Take the adjacent elevator car to the floor closest to the stalled car and open its doors.
- B. Set the mainline disconnect switches for both the stalled elevator and the rescue elevator in the “OFF” position. Also place the emergency stop switch of the rescue elevator, in the “STOP” position.
- C. By extending a pole through the opening between the car and hoist-way doors of the rescue elevator car, it may be possible to engage the interlock roller of the stalled elevator car so that its doors can be opened by hand. When using this method, be careful not to extend the pole into the hoist-way of any elevator that is still in service.
- D. A member of the rescue team should enter the stalled elevator car and set the emergency stop switch to the “OFF” position.
- E. The passengers should then be assisted from the stalled elevator, one at a time, by rescue personnel located both in the car and on the landing. Precautions should be taken to guard against any hoist-way opening below the car floor (platform) using an evacuation bridge when the elevator car is above the landing.

Unlocking Doors With Forcible Entry Tool

- A. Set the mainline disconnect switch to the “OFF” position.
- B. Open the doors with the use of the forcible entry tool. It should be used at the top of the elevator doors to minimize damage to the exterior doors.
- C. The passengers should then be assisted from the stalled elevator, one at a time, by rescue personnel located both in the car and on the landing. Precautions should be taken to guard against any hoist-way opening below the car floor (platform) when the elevator car is above the landing.
- E. After all occupants have been removed, close the elevator doors and post a temporary "Out of Order" sign on all doors, at all floors for that elevator, until the elevator maintenance repair person arrives.

F. Do not attempt to restore power to the stalled elevator unless there is an imminent health issue which would require emergency medical assistance. After the rescue has been completed, have a rescue team member stand by to inform the elevator repair person what switches were set and which doors were forced open.

STALLED ELEVATOR/NO PASSENGERS

A. Contact the Office of DFM Action Desk during daytime business hours or DFM Duty Manager during off hours to advise of the situation. DFM personnel shall call the elevator maintenance company responsible for that specific elevator, and advise the company of the situation, requesting repair service.

B. The Officer shall post a temporary "Out of Order" sign on all doors for that elevator on all floors, until the elevator maintenance repair person arrives.

ROUTINE MAINTENANCE

Routine maintenance deficiencies should be reported to DFM Action Desk. This includes such problems as elevator out-of-service, erratic movement, not stopping at exact floor level, lights out, or slow operation. If a problem develops during evening business hours, the WKU Police Department should contact the DFM Duty Manager, so that the elevator maintenance company can be notified.

ELEVATOR MAINTENANCE CONTRACTORS

DFM will provide the WKU Police Department and the EH&S Office, with a list of campus buildings, the types and number of elevators in each building, and the type of equipment necessary for each elevator rescue. DFM will update this list as necessary. The WKU Police Department will ensure that the police dispatcher has a current copy of this list.

ELEVATOR EMERGENCY TRAINING AND PRIMARY RESCUE CONTACT LIST

At least one WKU Police Officer on each shift shall and designated personnel from DFM will be trained to deal with elevator emergencies, and particularly with the procedures used to rescue trapped elevator occupants. Personnel from the EHS and DFM will receive this same training. All elevator emergency action training will be coordinated through the EH&S Office, with all new designated employees receiving training within 30 days.

A primary contact list is established with all DFM rescue trained personnel for rotation in emergency rescue. The contact list is maintained by the DFM.

EQUIPMENT

Prior to attempting any rescue, it is imperative that the rescue team has the proper tools and equipment ready for use. It is equally important that they are trained in the proper use of the tools and equipment. Some other tools and equipment necessary to make a safe rescue are:

1. Short extension ladder
2. collapsible or folding ladder;
3. hoist-way door unlocking device (elevator interlocking release keys)
4. two-way-radios
5. safety belts;

6. lifelines;
7. forcible entry tools;
8. flashlights

All rescue equipment is readily available and maintained by DFM for immediate use by all rescuers.

Procedure

When an elevator malfunctions and passengers are trapped inside an elevator car, the following procedure will be followed:

Only qualified Maintenance personnel, as designated by DFM Management are authorized to carry out this Rescue Procedure.

If University Police is contacted first via the elevator phone, Campus Police will notify the DFM Action Desk during normal work hours off hours, weekends and holidays The DFM employee on duty will be notified. DFM will dispatch the elevator service company to the scene or fully trained DFM maintenance personnel. DFM will also notify EH&S If DFM is contacted first, the Action Desk will notify Campus Police, the elevator company, Environmental, Health & Safety and the Maintenance Manager.

DFM will obtain an estimated time of arrival (ETA) from the elevator service company. This information will be passed on to responding personnel.

Campus Police and a certified DFM employee will be dispatched to the scene.

Campus Police/DFM personnel will maintain communication with the passenger(s) during the entrapment and inform the passenger(s) of the procedure that will follow. The officer/DFM personnel at the scene will inform the passenger(s) not to attempt to open the elevator doors or the overhead hatch.

The officer/DFM personnel on the scene will assess the situation and determine physical and emotional stress. The officer/DFM personnel will also assure the passenger(s) that they are not in any danger and that help is on the way. If immediate medical attention is required, the officer/DFM personnel will call 911 to activate the City of Bowling Green Fire and Rescue Department.

If an elevator car is aligned with the floor and provides a safe exit condition for the passenger(s), DFM personnel will help rescue the trapped passenger(s).

Before any attempt to rescue the trapped passenger(s) occurs, it is mandatory for the DFM personnel to pull and lock out the main disconnect switch to the OFF position for that elevator. This is the first step DFM personnel will perform once they have arrived at the scene. **THIS WILL KEEP THE ELEVATOR IN PLACE AND PREVENT ANY MOVEMENT.**

A safe exit condition for DFM personnel consists of **NO MORE THAN AN EIGHTEEN (18) INCH DIFFERENCE** between the floor that they are on and the floor of the elevator car. DFM personnel will determine this difference, to the best of their ability, without placing any passenger(s) in danger. If this distance is greater than **EIGHTEEN (18) inches** WKU DFM employees are **NOT** authorized to help rescue trapped passengers. If the distance between the floor and the elevator car can not be determined, WKU DFM employees are **NOT** authorized to help rescue trapped

passengers. WKU DFM employees are NOT authorized to replace any fuses and/or reset velocity switches for any campus elevator.

When WKU DFM employees are not authorized to help rescue the trapped passenger(s), ONLY a certified service technician from WKU's elevator service company has the authority to open the elevator doors and help rescue the trapped passenger(s). The certified service technician is the only person authorized to replace fuses, reset velocity switches, and/or reset the main disconnect switch for campus elevators.

The responding Campus Police officer will remain at the scene until all passengers are rescued safely.

DFM personnel will remain at the scene unless another priority/emergency situation arises that would require immediate response. If DFM personnel leave the scene, continual contact should be made available with the responding Campus Police officer.

If DFM personnel respond to an entrapment and no one is trapped inside the elevator car, the following steps will be followed:

1. Determine if the elevator is in working condition. If the elevator car is running safely, leave the elevator car in operation.

2. If the elevator car is not working properly, 1 of 2 scenarios must be followed:

- A. If the call is during normal working hours, 7:30-4:30

Monday through Friday and a non-holiday, DFM personnel will contact the Maintenance Manager with appropriate information (building, elevator car number). The Manager will determine the urgency of having the elevator car repaired based on operational needs and/or campus activities.

- B. If the call is during off-hours or a scheduled holiday, DFM personnel on duty/ University police will attempt to contact the Manager to determine if the elevator service company should be called. If the Manager is unable to be reached DFM personnel on duty/public safety officer will to the best of their ability make a judgment call to determine the urgency for repair. This judgment call must take into consideration operational needs and/or campus activities for that night, holiday and/or weekend. If repair is needed immediately, the DFM personnel on duty will take the elevator car out of service and will contact the elevator service company. If the repair can wait until normal working hours, the DFM personnel on duty will remove the car from service and signify the need for DFM Management to contact the elevator service company and note on his/her nightly report(s). In all cases, if the failed elevator is the only elevator serving the building, the elevator service company must be notified immediately and repairs must be expedited.

During off-hours, weekends and holidays, the elevator service company responding to the call must notify Campus Police to inform the University they are on the scene to investigate and resolve the problem. The University police office will contact the DFM employee on duty so he/she can accompany the elevator service technician to the scene. The DFM employee on duty will contact Campus Police when the repair is complete and the service technician has left the campus.

NOT ALL ENTRAPMENT SCENARIOS CAN BE COVERED IN THIS PROCEDURE.

A COMMON SENSE APPROACH MUST BE APPLIED WHILE ATTEMPTING TO RESCUE ANY TRAPPED PASSENGER(S). IF FOR ANY OTHER REASON A SAFE EXIT CONDITION DOES NOT EXIST, DO NOT ATTEMPT TO OPEN ELEVATOR DOORS.

IF THERE IS A LIFE OR DEATH SITUATION SECURE THE AREA, CALL 911 AND MAKE EVERY ATTEMPT TO CREATE AN EXIT CONDITION AS SAFE AS POSSIBLE BEFORE ATTEMPTING TO RESCUE THE TRAPPED PASSENGER(S).

This Program will be reviewed at least annually .