

# Inspection Tests for Emergency Elevator Communication System

Test	Description	Rationale	Reference
1	Push the call button. When the operator answers, ask them to tell you the cab #, building and address that you are calling from.	A passenger may not be able to tell the operator where they are calling from in a medical emergency, if they don't speak the language or if they are a guest visiting the building. The emergency telephone must be able to automatically identify to the operator where the call is coming from.	2.27.1.1.3d
2	Does a visual indicator activate when the call is answered?  Does the visual indicator and the telephone shut off when the operator hangs up?	Hearing impaired passengers must receive some visual confirmation that their call has been received. There should be accompanying text to indicate what the visual indicator means. Switchboards may not always provide the correct disconnect signal for handsfree telephones.	2.27.1.1.3c
3	Is the volume of the conversation adequate and acceptably free from static for both passenger and operator?	Test with a sound meter that conversation is taking place at a minimum level of 68 dbA at a distance of 3' from the phone speaker. This is normal conversation level. Hearing impaired and senior passengers will often have difficulty communicating at volume levels lower than this, particularly if there is any background noise from fans, etc.	CALSPA (Association of Speech Language Pathologists & Audiologists)
4	Push the call button to make a call. Wait 10 seconds and push the call button again. Does the phone shut off?	In the stress of an emergency, passengers will often press the call button more than once just to make sure that the call is going through. The phone must not shut off should this happen.	2.27.1.1.3b
5	Temporarily program the call timer to two minutes. Call the operator and see what happens at the end of the two minutes. Is the operator able to extend the call or does the phone hang up?	In an emergency, the operator must have the ability to extend the conversation if necessary. It is not acceptable for the phone to hang up without the operator receiving information as to how to extend the call.  <i>Note: It is not an acceptable alternative to set the call time to a longer period such as 99 minutes. Many switchboard systems will not automatically hang up handsfree telephones which means that the system would be unavailable for new calls for 99 minutes each time an emergency telephone was activated.</i>	2.27.1.1.3f

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6	Keeping the timer period at two minutes, have the technician temporarily program an emergency phone to call his cell phone. Answer the call by saying "Security office. Hold please". Put the phone down and come back 15 seconds later. Is there any indication as to where the call is coming from or how to download the location information?	<p>The operator must be able to download the location message "on demand". Some brands will automatically play the location message as soon as someone answers and then go into two-way communications. This is not an acceptable format given that passengers are frequently put on hold for a short period until an operator is free. If the location message has already played, the operator will have no way of knowing where the trapped passenger is located.</p> <p><i>Note: Most handsfree phones have the ability to replay the location message when speaking with the passenger. However, operators have no way of knowing which brand of phone is being used and must not be put in a situation where they are pushing various combinations of keys on their telephone in the hopes that one of them will download the location message for the trapped passenger.</i></p>	2.27.1.1.3d
7	Continue the previous test by waiting until the end of the two minute timer period. The phone should not shut off. Instead, it should hang up and redial.	Emergency telephones must be able to hang up and automatically redial a second number if they receive a busy signal or the call is not answered. Being put on hold indefinitely or reaching an answering machine must not fool the emergency telephone into thinking that the call has actually been answered.	2.27.1.1.2
8	If the elevator is in an "accessible" building, is the height of the call button between 890 mm and 1220 mm from the floor surface?	This requirement is often overlooked in modernization projects.	E17.2
9	For multi-elevator buildings, activate up to 3 emergency telephones at the same time. Is the operator able to have a clear conversation with each elevator and identify where the calls are coming from?	<p>With handsfree telephones, communication quality can deteriorate if more than one unit is having a conversation at the same time. It is a realistic scenario that multiple calls could be attempted at the same time in the event of a building power failure. The emergency communication system must be able to work normally should this occur.</p> <p>"Party line" or queuing formats are both acceptable as long as the operator knows where calls are coming from and passengers can clearly hear instructions from the operator.</p>	2.27.1.1.1

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Test	Description	Rationale	Reference
10	For buildings with remote machine and/or control rooms, has a means been provided to communicate with the elevators?	Remote machine rooms and control rooms are becoming more common with MRL systems. It is important that mechanics be able to communicate between these locations and the elevators.	2.7.8.4
11	For buildings having elevator travel over 60', has a rescue station been installed which can initiate a clear conversation with each elevator?	Typically installed beside the fire annunciator panel, the rescue station is necessary so that emergency personnel in the building can communicate with firefighters and/or trapped passengers. If any remote stations have been installed in the machine rooms, concierge desk, security room, etc., they must also be tested for the ability to call into the elevators.	2.27.1.1.4
12	Place a call from an elevator to the monitoring station (if calls are being monitored off site). Then call into that elevator from the rescue station (if one has been installed). It should cut off the conversation with the off-site operator and immediately go into two-way communications with the passenger.	<p>Calls from the rescue station must "override" any existing conversation that is taking place between the passenger and the monitoring station. Separate phone and intercom systems do not meet these criteria.</p> <p>Separated intercom and telephone systems can be extremely confusing for trapped passengers in that they could be hearing conflicting instructions from the operator and the on-site personnel at the same time via two separate speakers in the cab.</p> <p>Modern integrated communication systems solve this problem by combining both intercom and telephone functions into one package. Calls from the rescue station to the elevators will override an existing conversation with the operator, as per Code requirements.</p>	2.27.1.1.4a

### Recommended Monthly System Testing:

- a. Test #1: Confirm that elevators are calling out to monitoring station.
- b. Test #10: Confirm that calls can be made from MRL machine room(s).
- c. Test #11: Confirm that calls can be made from rescue / remote station(s).
- d. Batteries: Confirm that backup batteries have 4 hours of standby power.