

Elevator System Review



This is intended to be a simple review of your elevator equipment to help you understand the scope of our work when we review your elevator equipment. A periodic review of your elevator system is important and necessary to identify components that can require modernization.

A review of your elevator system can be easily conducted by an elevator contractor and should be performed more often than maintenance or inspections.

Below is a general checklist of areas to review prior to maintenance work.

- **Operation:** Does elevator service appear to be adequate for daily passenger traffic loads?
- **Passenger satisfaction:** Are people criticizing elevator service? Do they complain about waiting, crowding, or malfunctioning equipment?
- **Average elevator wait time:**
 - 25 seconds or less = excellent rating
 - 26 to 30 seconds = good rating
 - 31 to 35 seconds = fair rating
 - over 35 seconds = poor rating
- **Elevator maintenance callbacks:** Are they within the industry standard of two per elevator per year?
- **Performance:** Does current elevator operation compare with the performance specifications when the equipment was new? Have the insurance inspectors, maintenance contractor, or government recommended any repairs or adjustments?
- **Safety features:** Are the emergency alarm bell and intercom or telephone operating? If there is an emergency lighting system, does it operate during a simulated shutdown?
- **Fixtures:** Are hall and elevator call lights and floor indicators working correctly? Are overhead lights and ventilation systems operating?
- **Doors:** At stops, do the doors operate noisily? Are passengers bumped by the doors?
- **Starting and stopping:** Do elevators hesitate at floors too long after buttons are pressed? Do they start and stop abruptly or uncomfortably?
- **Leveling:** Does the car level with the floor at each stop so passengers will not trip?
- **Ride:** Do you hear squeaks and scrapes or feel vibrations when the elevators are running? Do they feel unbalanced?
- **Run times:** Do elevators grouped in the same bank appear to operate at different speeds during comparable runs?

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An elevator contractor is a good choice to conduct a traffic study that will collect key data on elevator usage and performance. A traffic study provides a detailed traffic and performance analysis of the elevator, indicating whether the system is operating up to its original specifications, as well as, an indication of regular maintenance or if performance levels have slipped that indicate wear on certain elevator system components.

Operations that are commonly reviewed include listed below.

- **Sounds:** Concentrate on sounds by alternately closing your eyes and covering your ears to intensify what you see, hear, and feel. Listen to the comments of people using the elevators.
- **Floor-to-floor time:** Time required to make a one-floor run. Measured from the time the hoistway doors start to close at one floor until they are fully open at the next floor.
- **Performance time:** Measured from the time the doors start to close at one floor until they are sufficiently open to allow passenger exchange at the next floor.
- **Car start time:** Measured from the time the doors start to close until the elevator actually moves.
- **Brake-to-brake time:** Measured from the time the car starts until it stops on a one-floor run.
- **Door open time:** Measured from the time doors start to open until fully open.
- **Door dwell time:** Length of time doors remain fully open by car or hall call without being affected by cancellation features.

The above tests should be performed near a mid-floor stop. Measurements should be taken in both directions and averaged.