Overhead Door Safety

Most Emergency Service Organizations (ESOs) have overhead doors installed at response properties to enclose and protect emergency vehicles from the elements and provide security. These doors may be used numerous times per day for various reasons such as emergency and non-emergency response and employee and pedestrian traffic. As such, they are frequently a contributing factor in losses to emergency vehicles and property, resulting in operational down-time and at times personal injury. VFIS is aware of over 3,000 of these types of occurrences per year.

Many incidents related to overhead doors could be avoided with no or low-cost solutions that incorporate employee behavior and safety awareness. This bulletin provides recommendations to help ESOs prevent injuries and property damage caused by overhead doors.

Historically, overhead door safety has focused on an entrapment concern for at-risk populations in the residential market. [1] This focus has led to the proliferation of laser sensors, pressure strips and specially designed door operators (Motors) that reverse direction quickly and adjust downward-closing forces to minimize personal injury or property damage. Many residential overhead door companies have developed these technologies to help mitigate unfortunate and costly incidents. Commercial doors systems, however, have been slower to develop these options because there are no specific standards or requirements for overhead doors in general industry. [2]

General Industry, Occupational Safety and Health (OSH) regulations [3] along with Underwriters Laboratory (UL) standards and the American National Standards Institute (ANSI) [4] provide voluntary standards and mostly reference the same personal health and safety concerns as a residential overhead door, centering safety devices around eliminating personal injury as a result of the door being closed inadvertently or falling on a person. While entrapment is a significant concern, it is also important to consider the potential for property damage that may result from an overhead door closing on an emergency vehicle.

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ESOs may consider the following industry solutions and suggestions to help improve overhead door safety.

- Participate in a regular maintenance schedule with an approved vendor for inspections, lubrication, and service.
- Develop, train, and implement strict policies for overhead door operation and safety.
- Use spotters every time the door is in motion.
- Create a policy that requires a passenger of the vehicle or spotter to operate the door from outside the vehicle instead of the driver/operator.
- Consider dedicated circuits for overhead door motors. (Newer style door operators/motors use microprocessors that may be affected by other electrical devices on the same circuit.)
- Consider dual door sensors, one at 48 inches and one at 6 inches, from the floor level, which allows for multiple points of detection for vehicles with higher than standard ground clearance.
- Install limit switches in a green light/red light configuration that indicates when the door is in motion and when it is stationary.
- Install limit switches that disconnect power to the overhead door once it is fully open for a pre-determined period.

Incidents involving overhead doors can result in injury, property damage, and operational downtime. These types of occurrences are preventable. ESOs can address this risk concern by implementing procedures for the routine maintenance and safe operation of doors. Limit switches, safety sensors, remote operators, lights, and alarms are essential but cannot independently prevent an overhead door incident. The human element, safety awareness, and culture are still critical in this risk exposure. Eliminating this safety concern is the responsibility of everyone at the Emergency Services Organization.

[1] Entrapment protection requirements issued in 1992 by the US Consumer Product Safety Commission are aimed at reducing the potential for entrapment between the edge of garage doors and the floor.
[2] Occupational Safety and Health Administration (OSHA). (n.d.). Standard interpretations. Retrieved from https://www.osha.gov/laws-regs/standardinterpretations/2002-09-10-0
[3] OSHA Standard 29 CFR 1917.114 provides standards for cargo doors that may also be useful for overhead doors used by ESOs.
[4] ANSI/CAN/UL 325 Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems is a voluntary standard that discusses specific safeguarding requirements for overhead door installations and operations and may be found at https://standardscatalog.ul.com/standards/en/standard_325_7.

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