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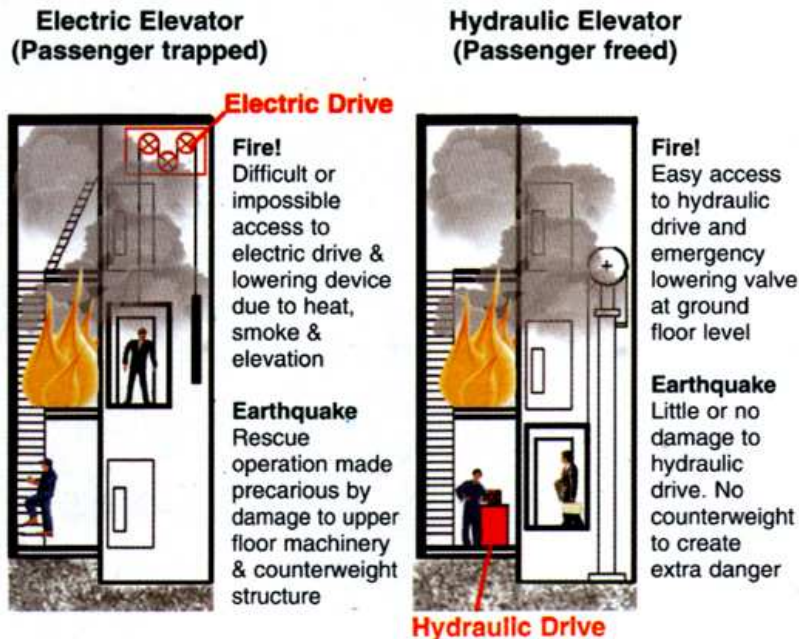
SAFETY AND SERVICE OF HYDRAULIC ELEVATORS

Construction Safety

For low-rise buildings, the elevator customer can choose between the hydraulic elevator with a machine room, usually in the basement of the building, or the electric (traction) elevator; increasingly without a machine room; with the machine drive in or directly adjacent to the hoistway and normally at the top of the building. In general, the hydraulic elevator has dominated the low-rise market because it is cheaper to build, install and service, and because it has a decidedly better safety record than the electric elevator. Especially in earthquake endangered areas, the hydraulic elevator has proven itself to be clearly the safer option. Due to the threat presented by swinging counterweights and also because the car is suspended from the top of the hoistway, the traction elevator is particularly vulnerable to a shaking building compared to the hydraulic elevator which is installed practically on the building's foundation. The July 2002 issue of EW informed us that the Seattle earthquake of February 2001 caused damage to what amounted to only 1% of the hydraulic elevators in the vicinity compared to 11% of the electric elevators.

Emergency Situations

In the case of fire, rescue personnel have the advantage of working from the ground floor hydraulic machine room, rather than at the top floor or in the hoistway of an electric elevator where smoke and heat can prevent any attempt at rescuing someone trapped in the car.



There is also the risk that with a counterweighted electric elevator, releasing the brake to lower the car may cause the car to go upward instead of down, possibly increasing danger to the passenger.

Considering the growing number of residential lifts being built, it is important that a member of the household can handle the procedure of manually lowering the car to the ground floor to release a stranded passenger in the event of an electrical power failure or other emergency. The safest such method is through the slow-speed, manual-lowering system of the hydraulic elevator, easily accessible at the ground floor and simple to operate.