Your hydraulic elevator may be at risk of cylinder pressure failure. Many hydraulic elevators that were installed prior to 1971 (1977 in Canada) included Single-Bottom Cylinders, buried in the ground beneath the elevator car. These cylinders may be exposed to corrosion and electrolysis. As a result, the cylinder may leak oil, leading to uncontrolled car movement and contamination of the environment. In 1971, the U.S. National Elevator Code began requiring all new installations to include Double-Bottom Cylinders. The ASME A17.1-2000 Code now requires that all Single-Bottom Cylinders be replaced with new Double-Bottom Cylinders or be equipped with code compliant safeties.

Why You Should Upgrade
Many hydraulic elevators operate by pumping pressurized oil into an underground cylinder. As oil enters the cylinder, the plunger rises, forcing the elevator car upward. To lower the car at the appropriate rated speed, oil is gradually released from the cylinder back into a power unit. If there is a leak in the cylinder and the oil escapes, there is no way to control the speed of the elevator’s descent. Elevators with Single-Bottom Cylinders are especially at risk of this occurrence.

The Double-Bottom Cylinder design, featuring a bottom plate plus a safety bulkhead with a relief orifice, protects against such catastrophic failure. Should the bottom plate rupture, the orifice allows only a small amount of oil to escape at a time, resulting in a controlled slow speed of descent. The result is a safer ride for passengers.
Features and Benefits of the Double-Bottom Cylinder:
• Reduces risk of catastrophic hydraulic cylinder failure.
• Lowers risk of environmental contamination.
• Upgrades to state-of-the-art technology.
• Offered by experts in hydraulic elevator operation.

Containment Protection Systems
Even with the safety of a Double-Bottom Cylinder, underground jacks can be affected by environmental conditions. To provide additional protection, Vertical Express offers a variety of corrosion protection systems. These systems comply with code requirements for the monitoring, containment and evacuation of oil and meet some of the most stringent quality standards used in the industry today. The end result is a superior product with the durability and flexibility demanded in today’s marketplace.

Vertical Express encourages you to carefully consider Single-Bottom Cylinder Replacement. In addition to increasing safety by meeting National Elevator Code requirements, this upgrade is a sound investment in your building’s future.

Order Single-Bottom Cylinder Replacements or learn more about our Containment Protection Systems through your Vertical Express representative. A salesperson and/or mechanic will survey your elevators, determine the proper product for the application and present a proposal to complete the upgrade. Trust Vertical Express with your elevators.