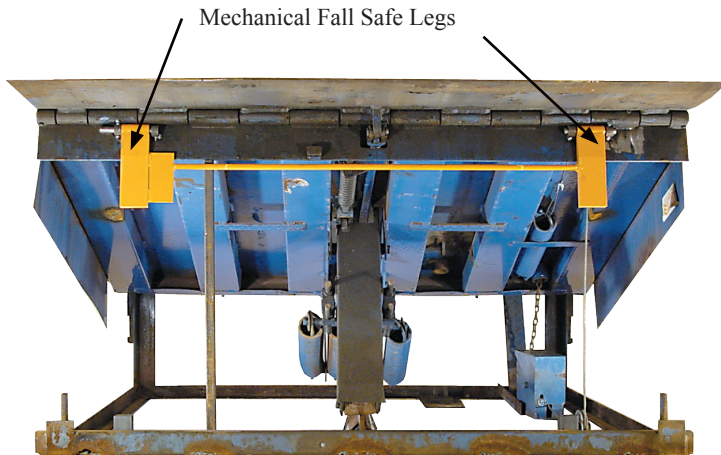




Engineered for Safety

An Explanation of Dock Leveler “Stump-out” and Mechanical Fall Safe Legs

Stump out issues associated with mechanical dock leveler safety legs:



It is common for mechanical or air actuated dock levelers to be supplied with mechanical fall safe legs (see photo below). When the dock leveler is above floor level the fall safe legs are intended to stop a loaded dock leveler from going below level in the event the dock leveler becomes unsupported during the loading / unloading operations. While somewhat addressing the intended concern, the fall safe legs can create other problems that occur much more frequently than the unsupported dock leveler condition that the mechanical fall safe legs are intended to address.

Mechanical Fall Safe Legs can cause Stump-out:

Stump-out occurs on dock levelers with mechanical fallsafe legs. Stump-out takes place when the lift truck drives across the dock leveler and the weight of the lift truck causes the trailer bed to lower (due to the compression of the trailer suspension) to the point where the mechanical fallsafe legs contact their stops. As a result of the stump-out the lip of the leveler creates a steep incline or obstruction when the lift truck attempts to back out of the trailer. This steep incline causes the lift truck to either be severely jarred or stopped when backing up, causing possible injury to the operator and / or damage to product, dock leveler, the lift truck. Stump-out can also occur when mechanical fallsafe legs can be manually released by pulling a release activator in the dock leveler deck assembly. The release is required every time the dock leveler must pass the below the stop position of the mechanical fallsafe legs. Upward movement during use can cause the safety leg to reset to the stored position. Versions of mechanical fallsafe legs do exist that are designed to remain retracted until required. They are activated by the rotation of the lip or sensing of speed. Experience has demonstrated that these designs don't always activate as required.

Stump-Out Position: Dock leveler can't move down to accommodate trailer bed movement.



Mechanical Fall Safe Legs

Stump-Out Position

Mechanical Fall Safe Legs can create the following concerns(continued from pg 1):

Vehicle restraints are the best method for addressing unscheduled truck departure:

Properly securing the truck / trailer to the loading dock reduces the likelihood of an unscheduled departure. Vehicle restraints lock onto and physically attach the trailer to the building. Additionally they provide an inside and outside light communication system for the loading dock attendant and the truck driver. The light systems improve communication and increase safety. Mechanical fall safe legs do not prevent an unscheduled truck departure. They are an attempt to stop an above floor load on the leveler from going to the bottom of the pit. It is preferred to be proactive and reduce the possibility of the unscheduled truck / trailer departure by incorporating a vehicle restraint system into the loading dock design.



Hydraulic fall safe is a better solution to protect against uncontrolled dock leveler deck descent:

As a standard feature on hydraulic dock levelers, hydraulic fallsafe incorporates a hydraulic velocity fuse to stop the uncontrolled descent of the dock leveler deck in the event of an unscheduled truck departure or driving onto a dock leveler that has not been properly stored. The velocity fuse is totally passive to the normal dock leveler operation. When required the velocity fuse senses increased pressure and oil velocity in the dock leveler cylinder and locks the deck descent only when the locking is required. Hydraulic fallsafe eliminates the concerns and issues related to stump out created by mechanical fall safe.



Consult a Pentalift Sales Representative for additional information or equipment recommendations

Note: Some photos may reflect products with optional features. All Pentalift Equipment products are subject to design improvement through modification without notice.

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