

SNYDER

Equipment, Inc.

Storing, Rolling, Lifting since 1947



PRODUCT INFORMATION

PENTALIFT VEHICLE RESTRAINTS

2946 Larimer St. Denver, CO 80205
303-295-1100 / 800-373-7693
FAX 303-295-2464
Email info@snyderequipment.com
www.snyderequipment.com

Why the Pentahook?

Our competitors hope that you do not discover why the Pentahook is properly positioned. However, for the ultimate in safety and reliability, you should.

In most facilities, the loading dock is the harshest and least considered from a maintenance and cleanliness standpoint. Generally, access to the loading dock operation is available to transport personnel not employed by your company and who are not trained or aware of your safety procedures and policies. In an effort to get in and out of the dock area as quickly as possible, safety procedures and policies can be compromised or ignored altogether.

Many of the conditions illustrated below can have an adverse effect on the operational effect of conventional, dock-face installed vehicle restraints. Even if the operation is partially compromised a disastrous situation could occur, resulting in an accident at your loading dock.

Loading docks are a necessity. Selecting the safest vehicle restraint is a responsibility.

Important safety equipment should not be affected by the elements commonly present at the face of every loading dock. The fact that the Pentahook is protected under the dock leveler results in the following benefits:



Eliminate downtime and maintenance costs caused by accumulation of snow, ice and debris. These conditions can also cause the restraint to show false, therefore dangerous, operation signals.

Direct and indirect costs of an industrial accident at the loading dock can easily exceed \$1,000,000 and result in increased insurance costs. The Pentahook Vehicle Restraint Safety System reduces the potential for such an accident.



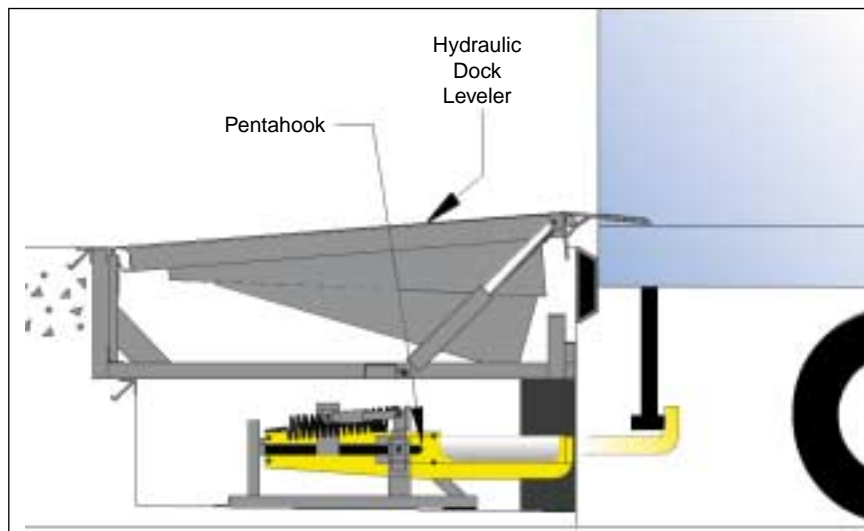
Eliminate damage to trucks and restraints from impact forces. **Eliminate** external wiring and the potential for electrical shock and/or damage to electrical connections during repetitive truck positioning.



Eliminate damage and costly repairs to the restraint or snow removal equipment caused by hidden impact. **Eliminate** difficulty of negotiating equipment close enough to face of the dock for proper snow removal.

Pentahook Vehicle Restraint Safety System

Installation Placement Positions It as the Ultimate Vehicle Restraint



The Pentahook's dual locking arms cycle out from under the leveler and hook on to the ICC bumper to safely and securely restrain the vehicle at the loading dock.



The Pentahook provides protection against:

Trailer Creep: The forward impact onto the trailer by the lift truck during loading/unloading causes the trailer to inch forward until the dock leveler lip falls unnoticed off the back of the trailer. Once this happens, the lift truck is prone to fall into the opening between the trailer and the dock leveler.

Unscheduled Departure: Thinking that the loading/unloading operation is complete when it is not, the truck driver pulls away from the loading dock. The lift truck operator unknowingly drives into the opening and falls with the lift truck and cargo to the driveway.

Landing Gear Collapse: Landing gear supports the front of the trailer when it is parked at the loading dock without the tractor in position. The repetitive motion of a lift truck driving across the dock leveler into the trailer puts excessive pressure on the landing gear. This can lead to its failure and cause the front of the trailer to collapse.

Providing Wheel Chocks Does Not Effectively Prevent These Types of Accidents Because:

- 1) Chocks may not hold the trailer if they slip on ice, snow, wet pavement or are improperly positioned.
- 2) Chocks may be viewed as an inconvenient nuisance by the loading dock personnel and therefore the chocks are not used.
- 3) Once chocks are stolen or missing, the trailer cannot be secured.



Pentahook in stored position, ready to accept truck.

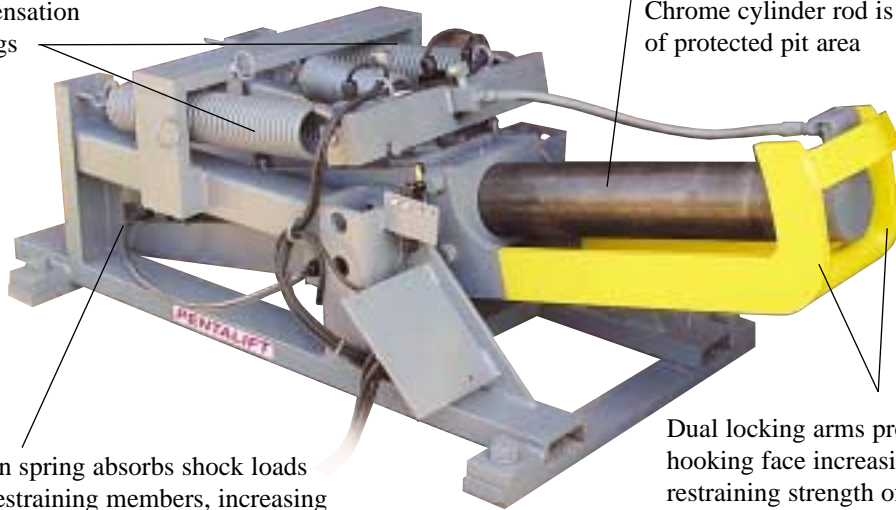
Pentahook Features:

- Minimum maintenance, cleaning and maximum reliability, as main workings are protected from weather and debris under the dock leveler.
- Installation position permits easy snow and debris removal and prevents trucks from "taking a run" at the restraint.
- Reliable, fully hydraulic operation finds and holds truck's ICC bumper, eliminating any truck movement.
- Dock Leveler interlocked with Pentahook ensures additional safety because dock leveler will not function until the Pentahook restrains the truck's ICC bumper or the wheels are manually chocked and the key override is activated by dock area supervisor.
- Permits access to dock face by all vehicles even those with low ICC bumpers or tailgates since no part of the parked restraint projects beyond the face of the dock.
- Programmable logic controller (PLC) allows for flexible interconnection with other equipment in the dock area.
- Unscheduled attempt to depart while truck is hooked will cause control panel light to flash and warning buzzer to sound.
- Existing loading docks can be modified to accommodate the installation of Pentahooks.

The Pentahook System

Restraint Unit

Vertical height compensation provided by tilt springs which allow the Pentahook to properly “float” up and down with the truck / trailer suspension during loading and unloading



Correctly positioned cylinder provides complete cylinder area for maximum holding strength. Chrome cylinder rod is never exposed outside of protected pit area

Operation range 9” to 29”

40,000 lb. restraining capacity

Compression spring absorbs shock loads applied to restraining members, increasing the effective restraining strength of the trailer’s ICC bumper

Dual locking arms provide an extra wide hooking face increasing the effective restraining strength of the trailer’s ICC bumper

Communication System

External Components



Deluxe light unit



Conventional and reverse image exterior signs

Internal Components



Control panel



Internal sign

Operation

When the Pentahook is in the stored position, the green light is illuminated on the deluxe external light unit, (ready to receive a vehicle) while the red light is illuminated on the internal control panel (unsafe to load/unload). Once the vehicle is in position, the dock attendant activates the restraint system to “Hook Vehicle” and the outside light automatically changes from green to red (no truck departure). The Pentahook securely engages the vehicle’s ICC bumper. The inside light on the control panel changes to green to indicate that it is safe to load/unload the truck/trailer. If the restraint cannot engage the truck’s/trailer’s ICC bumper, a warning buzzer sounds and the control panel’s red light flashes to indicate that the vehicle is not restrained.



Exterior Communication System (view from truck mirror)

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.

Direct and indirect costs of an industrial accident at the loading dock can easily exceed \$1,000,000 and result in increased insurance costs.

The Pentalock FM35 Safety System reduces the potential for such an accident.

For a loading dock safety system to be effective, certain important factors must be taken into consideration. There must be clear and accurate communication between the truck operator and the dock personnel. The safety system must be easy to operate and it must perform reliably regardless of the environmental conditions or the generally abusive nature of a loading dock area. The safety system must be designed, engineered and constructed to prevent a potentially serious accident at the loading dock. The Pentalock FM35 successfully addresses these issues and we confidently invite you to compare it with any and all other vehicle restraints.

The Pentalock FM35 Safety System Features

- Ease of operation
- Understandable, high visibility communication system
- Signal bar design reduces potential of false signals
- Heavy-duty structural components
- Reliable, low-maintenance hydraulic operation
- Low profile height of 12”
- Operating range of 12” to 30”
- Warning buzzer
- Interlocking capabilities with other dock equipment

The Pentalock’s 35,000 lb. pull rating offers protection against:

- Unscheduled departure
- Excessive trailer creep
- Landing gear collapse

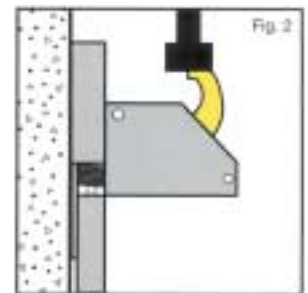
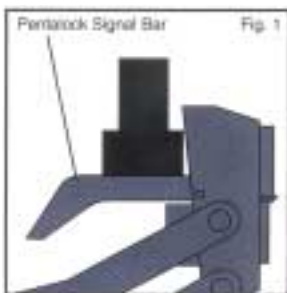


The restraining block of the Pentalock FM35 is shown in position on the truck’s ICC bumper.

The Pentalock Minimizes the Potential of Dangerous False Engaged Signals

The primary concept of a vehicle restraint system is to engage and hold a truck/trailer while communicating the loading/unloading status to the truck driver and the lift truck operator. The design of many competitive vehicle restraints can cause them to communicate that a truck/trailer is restrained when in fact, it is not. An incorrect signal is far more dangerous than no signal at all since it defeats

the primary purpose for installing a vehicle restraint system. A major advantage of the Pentalock FM35 is its signal bar, which minimizes the potential for a false signal. The Pentalock’s signal bar is positioned directly under the area where the ICC bumper should be when it is to be restrained. The Pentalock signal bar ensures the ICC bumper is properly engaged (Fig.1) before it activates the green light on the inside control panel. With other restraint designs, if the locking member tip contacts something under the truck (Fig. 2), or if the locking member doesn’t fully rise or rotate, the restraint can falsely signal that the truck/trailer is engaged. Pentalock’s signal bar ensures that this can’t happen.



Pentalock Operation is Operator Controlled

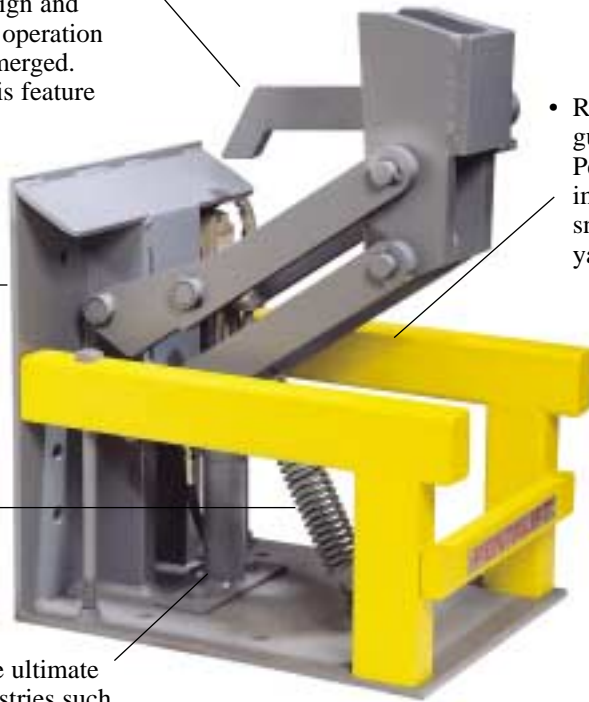
The non-impact operation of the Pentalock FM35 ensures continuing trouble free performance and eliminates damage to the restraint system or to an incoming vehicle’s ICC bumper. Other non-impact models are available, but only the Pentalock Model FM35 vehicle restraint provides a structural protective guard as standard equipment. The structural guard withstands accidental impact to the operating components caused by unusually low incoming vehicles and snowplows. The compact design reduces the projection from the dock face, thereby minimizing the risk of accidental impact from incoming vehicles, exterior cross traffic or snow removal equipment.



Competitor’s impact operation can cause damage

Features and Components: Pentalock FM35 Safety System

- Signal Bar requires approximately 30 lb. of pressure to activate, thereby eliminating false engagement signal.
- Flood resistant. Standard design and construction ensures reliable operation even after unit has been submerged. Other manufacturers offer this feature as an option or not at all.
- Heavy mounting plate ensures secure installation.
- Return spring ensures positive retraction of locking assembly
- Hydraulic cylinder offers the ultimate in reliability (proven in industries such as aircraft and heavy construction equipment), eliminating problems associated with external electric motors, or gas spring operation.



- 35,000 lb. drawbar rating

- Rugged structural guard protects Pentalock from impacts such as snow removal yard trucks etc.



EZ Clean Option

- EZ Clean option facilitates debris removal at loading dock area.

Reliable Hydraulics

- Internal wall mount installation safely positions motor and pump assembly away from the elements, condensation and the potential impact of an incoming vehicle.
- Proven reliability. Same style of hydraulic power unit used in hydraulic dock levers for over forty years.



Communication

Exterior high visibility, "traffic-style" lights and dual image safety yellow instruction signs provided as standard. Narrow width of light and signs facilitates easy installation between dock seal side pads. Interior sign directs lift truck operator to load/unload on green light signal only.

Control Panel

- NEMA 12 gasketed wall mount control station.
- High visibility interior signal lights co-ordinated with exterior signal lights.
- Other manufacturers provide a switch to turn off the power to the safety system, the Pentalock FM35 safety system is always activated.
- Comes with selector position and amber light to accommodate "Override" mode.
- Clear, concise operating instructions.



Pentalock MR35 Mechanical Vehicle Restraint

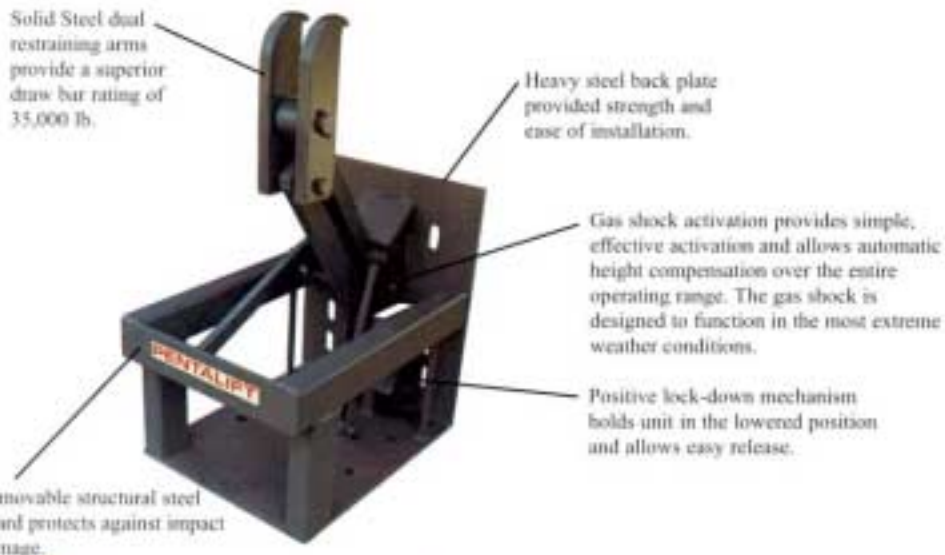
The Pentalock MR35 Mechanical Vehicle Restraint offers a rugged structural design, simple operation and maximum product value. The loading dock has been rated as one of the most hazardous areas of a facility. Serious loading dock accidents can result from such things as premature truck departure, trailer creep and collapsing landing gear. Pentalift's MR35 offers a practical solution to loading dock safety concerns. Construction features, such as the heavy duty steel guard and solid steel restraining arms ensure a long, reliable life.

Operation

When not in use, the restraint is held in the lowered position by the positive lock-down mechanism. Once the truck/trailer is positioned, the operator uses the "T" handled operating bar to release the lock-down. The restraining arm, rises creating a barrier for the truck's/trailer's ICC bumper. If no ICC bumper is present or it cannot be restrained, the operator returns the unit to the stored position and manually chocks the vehicle's wheels. The restraint "floats" over the entire operation range in relation to the movement of the truck's/trailer's suspension. When loading/unloading is complete, the operator uses the "T" handled operating bar to return the restraint to the lowered position.



Simple activation of restraint.



Low effort return to the stored position.

The restraint is designed to provide automatic vertical compensation to accommodate the movement of the trailer's suspension during loading/unloading. Gas shock activation and a positive lock-down mechanism make the MR35 a reliable and easy to use product. The simple operation promotes continued use of the restraint by the dock attendant. Its fully mechanical design makes the restraint easy to both install and maintain. Additionally, this piece of equipment offers the flexibility to relocate the MR35 if necessary.

Specifications

Pentalock MR35 mechanical vehicle restraint as manufactured by Pentalift Equipment Corporation. The vehicle restraint is to be of non-impact design. An operating range of 12" to 30" is to be provided with a restraining capacity of 35,000 lb. The unit is to be gas shock activated and incorporate a positive lock-down mechanism to hold the restraining arms in the lowered position. When in use the restraint shall be capable of automatic height adjustment over the entire operating range. A heavy duty, removable steel guard shall be provided to protect the unit from impact damage. A "T" handled operating bar shall be provided to release and store the restraint.

NOTE: All Pentalift Equipment products are subject to design improvement through modification without notice.