

The background of the advertisement is a close-up photograph of a heavy-duty metal vehicle restraint mechanism, likely a wheel chock. The mechanism is painted a dark green color and features a prominent yellow safety strap. A large, circular, textured metal disc is attached to the end of a horizontal rod. The entire scene is set against a background of a green diamond-plate metal surface. In the upper right corner, the word "KELLEY" is written in a bold, white, sans-serif font, enclosed within a white inverted triangle. The overall lighting is dramatic, with strong highlights and deep shadows, emphasizing the industrial nature of the product.

**KELLEY®**

# VEHICLE RESTRAINTS

EVERY DAY, THOUSANDS OF PEOPLE COUNT ON KELLEY to keep their loading docks safe. That's why we've developed a comprehensive lineup of simple, reliable, low-maintenance safety products, specially designed to prevent loading dock accidents.

**WARNING**  
STAND CLEAR  
NO STEP

# Don't Compromise On Safety. Count On Kelley.

**LOADING DOCK ACCIDENTS CAN HAVE SERIOUS CONSEQUENCES** for any company — both in physical injuries and financial obligations. Yet, in many cases, they can be prevented with proper safeguards. Common accidents include:

- Forklifts driving off the dock because a vehicle leaves before loading or unloading is completed.
- Vehicles creeping away from the dock as forklifts continually move in and out during loading or unloading, creating a dangerous gap between the vehicle and the dock.
- Collapse of trailer landing gear due to constant rocking motion of forklifts moving in and out during loading.

**Kelley offers a full range of safety products designed to prevent these types of costly accidents.**

## **STAR® VEHICLE RESTRAINTS.** **Superior Performance To Satisfy** **OSHA And Your Bottom Line.**

When it comes to restraining vehicles and vehicles during loading and unloading, the Occupational Safety & Health Administration (OSHA) is very clear:

***All vehicles must be restrained during loading and unloading\****

The responsibility clearly rests with the employer.

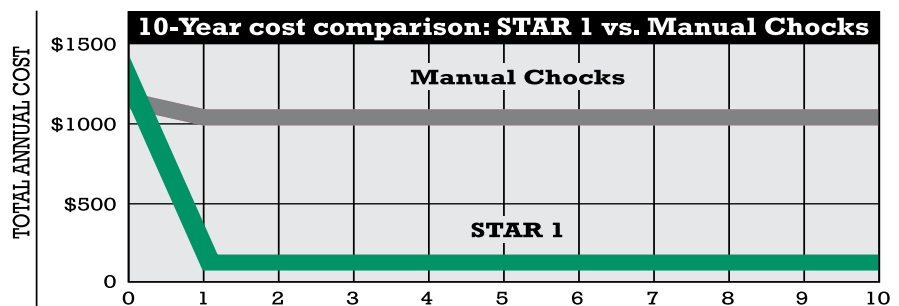
\* Requirement 29 CFR 1910.178 (k) (1)

## **Manual Wheel Chocks Are Not Effective.**

Historically, manual rubber wheel chocks were the only things available to hold vehicles at the dock. However, compared to modern restraints, manual wheel chocks are a much less effective restraint method.

- Chocks are easily lost, thus unavailable to use.
- Chocks are hard to position and use properly.
- Chocks slip and slide on gravel, wet pavement, ice and snow.

Not only are chocks less effective than modern restraints, they actually cost more to use than a simple STAR mechanical restraint (see chart).



A STAR®1 vehicle restraint saves almost \$9,000 over 10 years compared to manual chocks. Sure, a STAR restraint requires an initial capital investment, but the labor involved in using wheel chocks costs more every year. If your dock worker labor rate is \$10/hour and you service only five vehicles per day, the STAR 1 vehicle restraint saves about \$900 annually, starting in the second year.

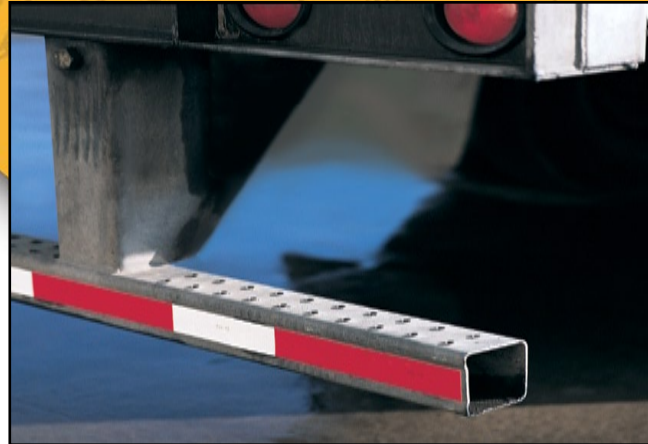
# STAR<sup>®</sup> Power: The Benefits.

**STAR vehicle restraints are the best performing and least costly restraints to operate.**

**Here's why:**

**Non-Impact Operation.** All Kelley STAR vehicle restraint models are based on non-impact operation, an advantage that offers many benefits:

- No rear impact guard damage.
- Longer service life.
- Better, more reliable performance.
- Less maintenance.
- Compatible with NHTSA regulation rear impact guards..



**Superior Communication.** STAR restraints offer positive communication systems to help avoid one of the biggest dock safety problems — poor communication between dock workers and vehicle drivers:

- Exclusive hook-mounted sensor bar senses actual contact between the throat of restraint arm and the vehicle's rear impact guard.
- Standard LED exterior and interior lights.
- Easy-to-see printed signs.
- Audible alarms.

**Low Maintenance.** The entire line of STAR vehicle restraints is engineered to minimize maintenance requirements and costs:

- No alignment.
- No scheduled adjustments.
- No lubrication.

**Simple Design.** STAR vehicle restraints exhibit unmatched design simplicity, another advantage with several benefits:

- Fewer moving parts, fewer problems.
- Easier, more reliable operation.
- Reduced training requirements.
- Lower maintenance costs (labor and parts).
- Longer service life.





### Manual Operation

- Manual operation is ergonomically friendly and not physically demanding.
- Easy-to-use push bar allows dock worker to engage and release hook from dock level.



### STAR 2 Communication System

- Exclusive sensor bar system
- Interior LED light display for dock workers.
- Exterior LED light display for vehicle drivers.
- Caution signs for inside and outside the dock.



### STAR 2 Options

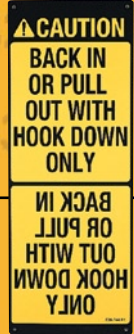
- Stand Off is available for use with Edge-of-Dock levelers or dock bumpers that exceed 4" projection.
- Audible alarm that sounds if restraining arm does not contact rear impact guard; includes push-button reset.





## Manually Operated STAR<sup>®</sup> 1.

**OUR BASE MODEL**, the manually operated STAR 1, offers excellent performance and value and is an economical alternative to the STAR 2.



### STAR 1 Communication System

- Caution sign is mounted outside, for vehicle drivers.
- Warning sign is mounted inside, for dock workers.

### STAR 1 Options

- Stand Off is available for use with Edge-of-Dock levelers or bumpers that exceed 4" projection.



### STAR 1 with TRUK ALERT<sup>®</sup>

- Interior LED compact lights with manual toggle switch and exterior LED compact lights

# Manually Operated STAR<sup>®</sup> 2 With Sensor Bar System.

**THE STAR 2 IS AN EXCEPTIONAL VALUE** offering manual operation plus Kelley's exclusive sensor bar and the industry's most effective communication system:

- Exclusive sensor bar.
- Interior & exterior LED red/green communication lights.
- Simple, manual, non-impact operation.
- 30,000 lbs. of restraining force.
- Works with nearly all styles of rear impact guards and types of dock levelers.
- Low profile - Stores at 9.5" off grade.
- Requires low maintenance.
- Low cost of ownership.

- ① **Durable Latch Lever** is a simple, easy-to-use mechanism that releases the restraining arm when the system is used and holds the arm securely in place when it is in the stored position.
- ② **Rugged Restraining Arm** is made of cast ductile iron with a 45,000 PSI yield strength.
- ③ **Exclusive Sensor Bar** automatically senses the actual contact between the throat of the restraint arm and the vehicle's rear impact guard and communicates status via red/green LED lights.
- ④ **Reliable Industrial Gas Spring** is a heavy-duty, ball-stud-mounted device. It raises the restraining arm to hook the rear impact guard, then "floats" to maintain rear impact guard contact as vehicle height changes.
- ⑤ **Solid Mounting Frame** is 3/8" structural steel plate, secured with concrete anchors. An exclusive separate 1/4" steel shear plate anchors into the dock pit floor.

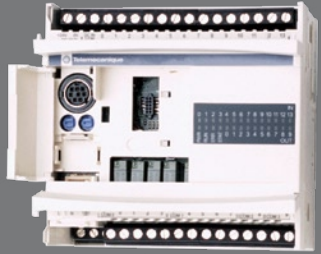


# Linear Actuated STAR<sup>®</sup> 4.



#### Advance wiring board technology

- Significantly saves interior panel space making room for additional options and integration of other dock equipment controls into the same panel.

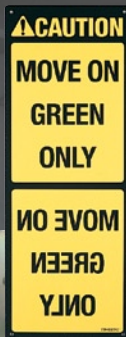


#### Programmable Logic Controller (PLC)

- Solid state PLC with advanced "real-time" diagnostic capabilities and coded display system providing operator with information on restraint's status.

**THE STAR 4** vehicle restraint offers a higher level of automation and convenience. The restraining arm is raised and lowered automatically at the touch of a button by a linear actuator drive system. The programmable logic controller (PLC) offers more flexibility to meet the evolving needs of your facility. The Kelley STAR 4 vehicle restraint is designed to engage the rear impact guard of a vehicle and hold the vehicle at the loading dock during the loading and unloading process.

- Push-button control panel
- Dependable linear actuator operation
- Programmable logic controller (PLC)
- Non-impact design & operation
- Automatic interior/exterior 24V LED light communication system
- Exclusive sensor bar indicates positive engagement with rear impact guard
- Alarm provides audible alert if sensor bar/rear impact guard contact is not made.
- 30,000 lbs. of restraining force.
- Requires low maintenance.
- Low cost of ownership.
- Low Profile – Stores 9.5" Off Grade
- Horizontal hooking range 0 - 10" from face of 4" bumper
- Captures & complies with NHTSA regulation rear impact guards

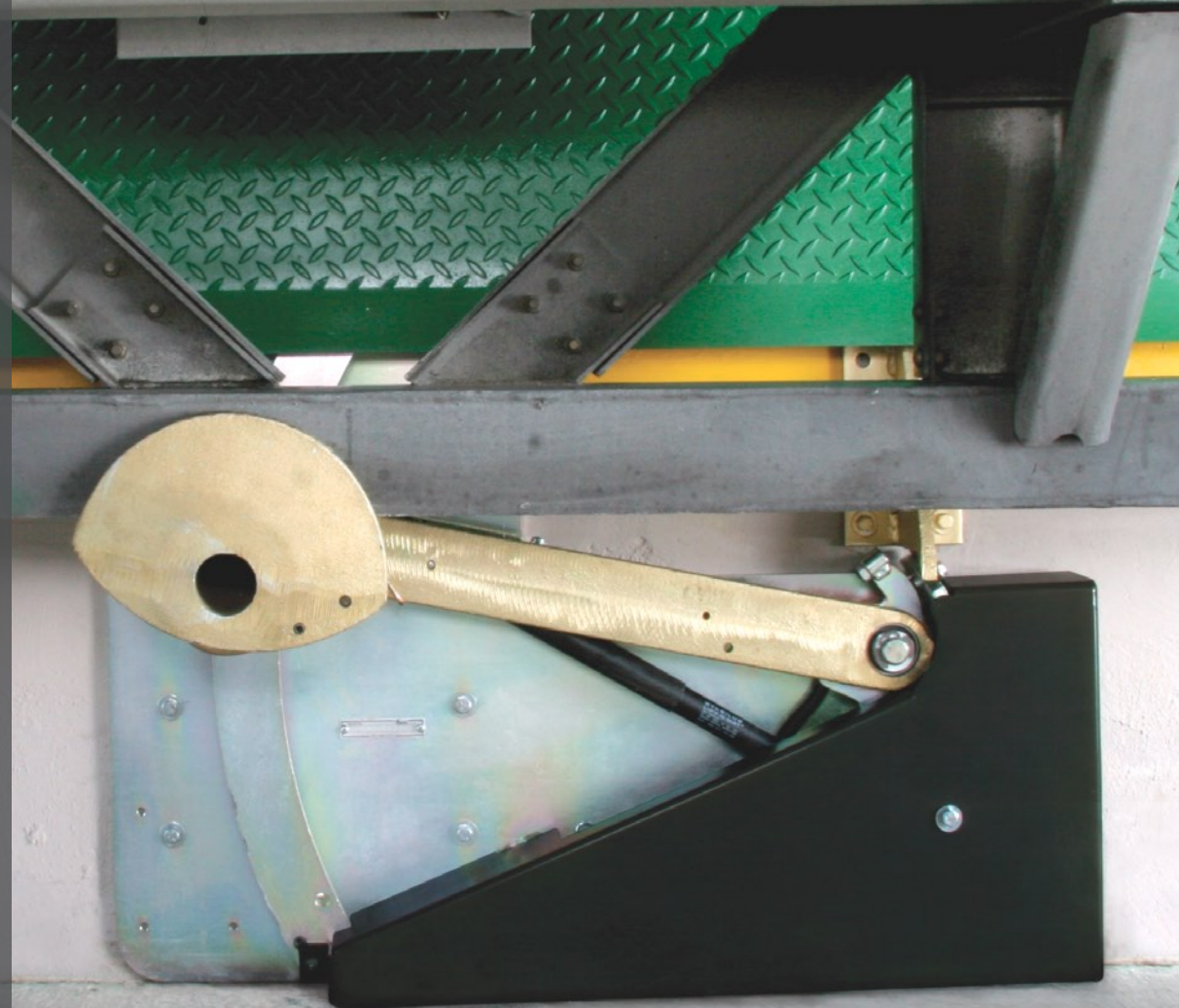


#### STAR 4 Communication System

- Exterior instruction sign for vehicle drivers.
- Operating instructions printed on control panel.
- Exclusive sensor bar automatically senses and communicates the actual contact between the throat of the restraint arm and the vehicle's rear impact guard.
- Interior & exterior LED red/green communication lights.

#### STAR 4 Options

- Lip Limit Switch that automatically activates unit when dock leveler lip is extended.
- Key Switch Override for alarm system.
- Stand Off for use with Edge-of-Docks or bumpers that exceed 4" projection.

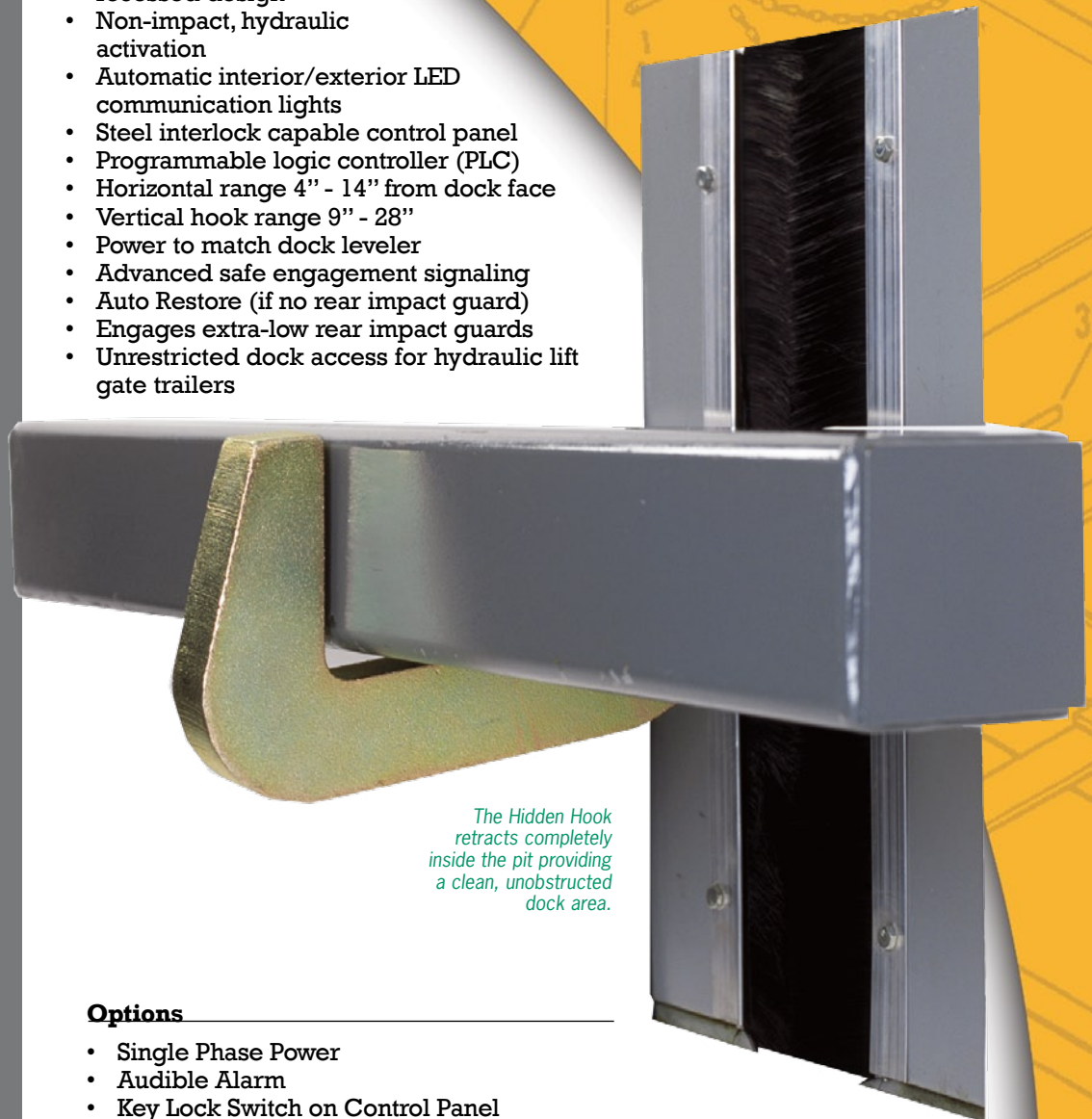


# Hydraulically Activated Hidden Hook™

**A UNIQUE, NON-IMPACT, RECESSED DESIGN.** The Kelley HIDDEN HOOK is a recessed, pit-mounted vehicle restraint that provides a clean, unobstructed dock area when stored and effectively controls vehicle movement by grabbing and holding the rear impact guard throughout the loading and unloading process.

## Features.

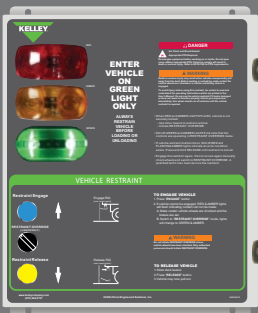
- Pit mounted, recessed design
- Non-impact, hydraulic activation
- Automatic interior/exterior LED communication lights
- Steel interlock capable control panel
- Programmable logic controller (PLC)
- Horizontal range 4" - 14" from dock face
- Vertical hook range 9" - 28"
- Power to match dock leveler
- Advanced safe engagement signaling
- Auto Restore (if no rear impact guard)
- Engages extra-low rear impact guards
- Unrestricted dock access for hydraulic lift gate trailers



*The Hidden Hook retracts completely inside the pit providing a clean, unobstructed dock area.*

## Options

- Single Phase Power
- Audible Alarm
- Key Lock Switch on Control Panel
- Pit Cover



# Integrate Your Kelley Equipment For Safer, More Efficient, More Productive Docks.

## KELLEY RESTRAINTS

can be integrated with other dock equipment, including dock levelers, dock doors, inflatable seals or shelters, dock lights and security systems — improving productivity, security and environmental control. Kelley's Master Panel dramatically increases safety and operational efficiency by integrating and interlocking equipment controls, ensuring that equipment is always used in proper sequence.



## LOADING DOCK SAFETY: Realities & Responsibilities

**GLOBALLY, COMPANIES ARE OPTING** for a safe, power-activated vehicle restraint like the STAR 4 to reduce unnecessary expenses. However, while the STAR 4 Vehicle Restraint is a great start, it's only one link in the safety chain. A durable dock leveler like the aFX® Air-Powered Dock leveler is another crucial element for a fully protected dock.



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A continuing research program is in effect at Kelley. We reserve the right to incorporate product improvement at any time without prior notice.