

RESTRAINT  
WHEEL



# SAFETY

## DAMAGED REAR UNDERRIDE GUARDS. STRAIGHT TRUCKS. LOW BOYS. STEP VANS. LIFT GATES.

### KELLEY HAS A SOLUTION FOR THEM ALL.

Conventional vehicle restraints rely on engaging a trailer's rear underride guard to safely secure them to the dock. Unfortunately, many trucks have missing or damaged rear underride guards or are equipped with hydraulic lift gates or special bumper configurations and cannot be engaged by conventional restraints. Traditionally, the only option available was to use rubber wheel chocks. But these have proven to be ineffective, especially in wet and icy conditions.



## IT'S ALL ABOUT SAFETY.

Investing in trailer restraints is critical to the safety of your dock workers. Traditional vehicle restraints address common accidents at loading docks, including Premature Departure, Trailer Creep, Trailer Walk and Landing Gear Collapse:

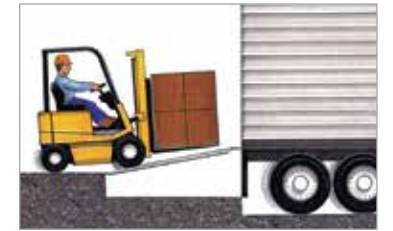
### PREMATURE DEPARTURE.

Truck drivers think loading is complete, or simply connect the wrong trailer and pull away while the dock attendant is still loading or unloading.



### TRAILER CREEP.

The constant impact of a fully-loaded, moving forklift can cause the trailer to creep forward inch by inch, beyond the reach of the leveler lip, causing the leveler to slip off the back of the trailer and drop suddenly.



### TRAILER WALK.

During loading or unloading, the displacement of weight by the forklift can cause air-ride suspension trailers to move in an elliptical fashion, causing it to "walk" away from the dock in a more prominent motion.



### LANDING GEAR COLLAPSE:

With some older trailers, pressure exerted by a fully-loaded, moving forklift can cause the trailer's landing gear to shift or rock, and ultimately collapse, sending the front of the trailer to the ground and the back of the trailer up in the air.



HOWEVER, MANY CONVENTIONAL VEHICLE RESTRAINTS may not engage the wide range of trailer styles or configurations that appear at your loading docks, such as:



LIFT GATE TRAILERS. Many trailers equipped with lift gates impede a vehicle restraint, either by blocking access to the Rear Impact Guard, or having a lift gate system that does not include a Rear Impact Guard.



DAMAGED REAR IMPACT GUARDS. Some Rear Impact Guards have been bent or damaged over the years, rendering them impossible to restrain with a traditional vehicle restraint.



UNCONVENTIONAL TRAILER CONFIGURATIONS. Some trailers have configurations that can affect the ability to engage a traditional vehicle restraint. From multiple axle configurations to obstructing trailer parts near the Rear Impact Guard, traditional vehicle restraints are not equipped to effectively handle all types of trailer situations.

# MODELS

## MANUAL SAFETY-CHOCK™

SIMPLE, SAFE & EFFECTIVE.

Kelley's KMWC Series Manual Safety-Chock provides loading docks with a cost-effective, versatile wheel restraint solution, capable of engaging and restraining the wide range of trailers that come to the dock. Easy installation, simple operation and minimal maintenance provide a lower lifetime cost of ownership than other wheel restraint systems, and its ergonomic design enables easy maneuvering for accurate and reliably safe operation.

### KELLEY ADVANTAGE

### DESIGN HIGHLIGHTS

#### TRAILER COMPATIBILITY

Restraint secures the trailer's wheels instead of the Rear Impact Guard (RIG).

Standard 10' (3 m) long guide rail with 6' (1.8 m) engagement range can restrain trailers with lift gates, damaged RIGs, multiple axles and/or wheel covers and mud flaps.

#### RESTRAINING FORCE

Restraining arm engages wheel near the axle height, ensuring superior capture.

Provides 32,000 lbs. (142 kN) of restraining force confirmed using ANSYS analysis and live-load testing.

#### RUGGED CONSTRUCTION

Heavy-duty, hot dip galvanized steel components ensure long structural life.

Guide rail and end cap deflector designed to withstand the weight of off-center trailers.

#### POSITIVE COMMUNICATION

LED interior/exterior lights are standard, and provide superior performance versus incandescent bulbs.

Carriage and trailer presence sensors provide effective communication of restraining arm position.

106-decibel exterior audible alarm alerts personnel if restraint is prematurely disengaged.

Inside release button allows dock attendant to signal when loading/unloading is complete.

#### EASE OF OPERATION

User-friendly, 2-step engagement/disengagement only requires 35 lbs. (156 N) of operating force.

Ergonomic design of activation handle is 44 ½" (1,131 mm) long with safety-yellow grip.

No bending or lifting required to engage/disengage restraining arm.

#### INTEGRATED TECHNOLOGY

Restraint controls can be interlocked and sequenced with dock leveler, overhead door or other equipment.

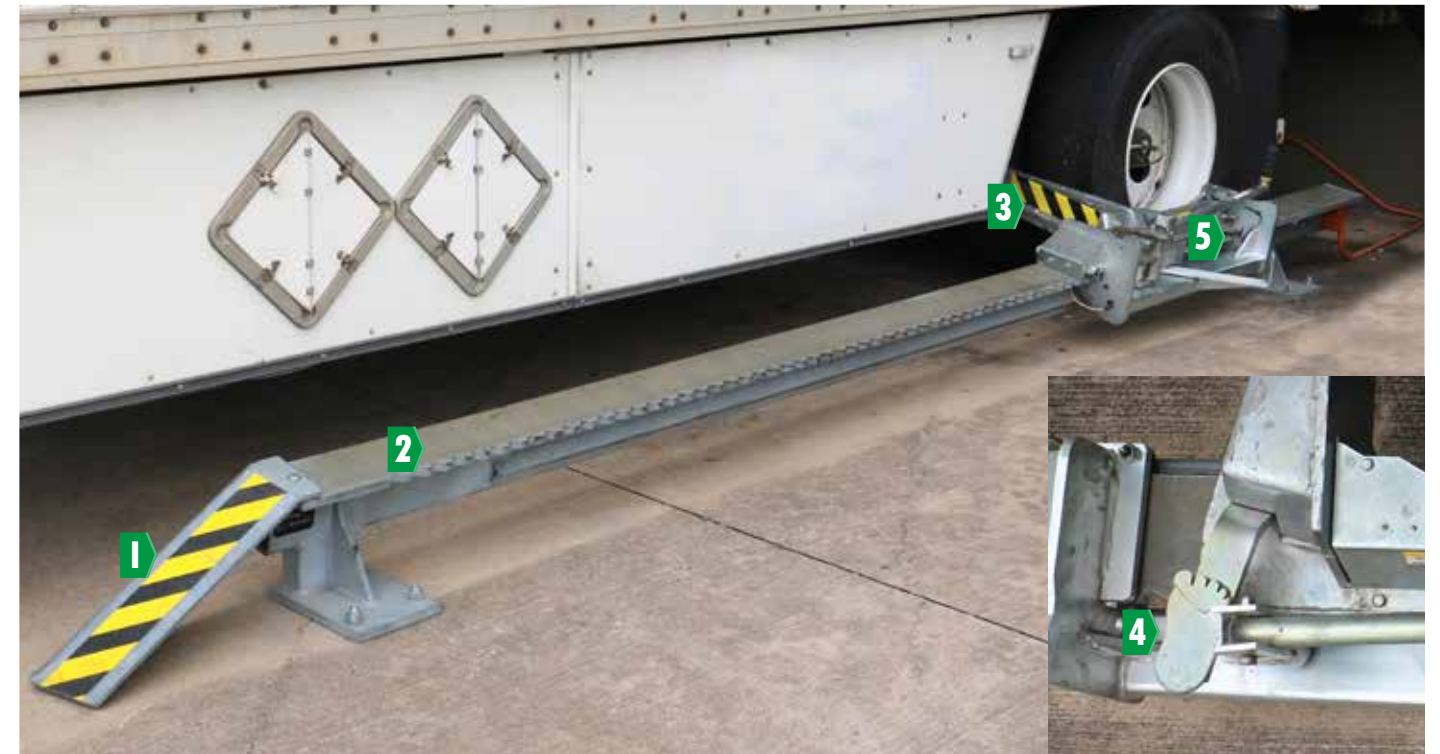
Restraint controls easily integrated with 4SIGHT dock/yard management system.

#### DESIGNED FOR EXTREME WEATHER

Galvanized finish and 10-degree angle of guide rail enable restraint to withstand snow, ice and debris.

Optional 17' (5.2 m), 120-volt heat tracer cable helps clear snow and ice.

Trailer presence sensor is IP67 rated and proximity switch is sealed and waterproof.



- 1. IMPACT-RESISTANT END CAP.** Rugged construction is able to withstand trailer weight, and acts as a guide for backing trailers.
- 2. GUIDE RAIL.** Hot dip galvanized ¾" (19 mm) rail is easily installed with ¾" (19 mm) concrete wedge anchors. Standard guide rail 10' (3 m). Optional 13' (4 m) and 16' (5 m) lengths.
- 3. RESTRAINING ARM.** 15" (381 mm) long, 4" (102 mm) high and ½" (13 mm) thick steel arm enables full contact with at least one wheel, even if trailer is not flush with restraint. Design avoids potential of "chock pinch."
- 4. FOOT PEDAL.** Easily identifiable zinc-plated foot pedal allows for quick chock release.
- 5. ELECTRIC COIL CORD.** Allows electrical feed and sensor connection throughout entire working range. Coil is fed along aircraft-quality steel rope.

### USER-FRIENDLY OPERATION



The operator slides the restraint carriage on the guide rail, positions it in front of the wheel, and pivots the restraining arm to lock it in place and secure the wheel.



Once loading/unloading is complete, dock worker presses release button inside, alerting outside operator that it is safe to disengage wheel restraint. A simple press of the foot pedal disengages the restraining arm, rotating it back and away from the wheel.



Exterior Lights

TRAILER SENSOR: ALS & MLS light systems are shipped complete with inside control panel, exterior light, and sign. - Standard LED red/green communication lights.



TRAILER SENSOR: IP67-rated photo cell sensor confirms presence of wheel in safe engagement range, and alerts both dock worker and restraint operator of premature disengagement.



## AUTO CHOCK®

THE IN-GROUND SOLUTION FOR ALL ENVIRONMENTS.

The Kelley AC Series Universal Truck Chock in-ground restraint is a permanently installed solution for your wheel restraint needs, featuring an automatic wheel chocking system that restrains trailers with a hydraulically operated moving wheel chock. The functionality means you'll have continuous restraining force for even greater security, reducing the probability of landing gear collapse, vehicle creep or vehicle walk. And since the chock is mounted in-ground, you'll experience no interference for snowplows or drive cleanup.

### FEATURES

- No "lift gate" interference
- No pup trailer interference
- Push-button activation
- Flush-mounted, in-ground design
- Self-contained, remote-mounted power pack
- Electrical components and controls remote-mounted inside dock

### DESIGN

1. Heat trace cable keeps the unit free of ice and snow in winter.
2. Only two moving parts for low maintenance and long working life.
3. Massive chock is made of 1/4" structural steel; trucks can't drive over it like typical wheel chocks.
4. Hydraulic hoses are protected from exposure and damage.
5. Double-acting hydraulic cylinder with direct-coupled motor and drive pump for trouble-free operation.

- Double-acting hydraulic cylinder
- Internal/external light control package
- Virtually no maintenance required
- Constant restraining force to help prevent "trailer creep"
- Only two moving parts
- Heat tracer cables prevent ice build-up
- Audible motion alarm



## SURFACE CHOCK™

THE ABOVE-GROUND SOLUTION FOR TOUGH CONDITIONS.

For security even under the most extreme weather conditions, the Kelley SC2000 Series surface-mounted wheel restraint is the most rugged wheel restraint solution. Its above-ground mount means operations won't halt no matter what Mother Nature brings, while a hydraulic-operated wheel chocking system allows for simple push-button control that doesn't impede lift gate operation or interfere with a landing gear. And with self-lubricated guide bearings and no mechanical drive components to wear out, maintenance has never been simpler.

### FEATURES

- Push-button activation
- Acts as a guide rail to help trucks back in straight, preventing shelter damage
- Sealed roller bearings
- Remote-mounted hydraulic power pack
- Hot-dipped galvanized finish
- Sealed, waterproof 24-volt proximity switches
- No "lift gate" interference

### OPERATION

1. The chock is activated by the dock attendant through the control panel.
2. The chock moves forward until the sensing roller makes contact with the rear wheels, activating the SURFACE CHOCK.
3. The chock reverses and secures the rear wheel, clamping the trailer in position.

- No pup trailer interference
- No mechanical drive components
- Virtually no maintenance required
- Two-speed hydraulics
- Integral positioning guide rail
- Low-voltage electrical requirements
- Internal/external light control package
- Constant restraining force to help prevent "trailer creep"

# INTEGRATE YOUR KELLEY EQUIPMENT FOR SAFER, MORE EFFICIENT AND PRODUCTIVE DOCKS.

Streamline your loading dock equipment with the simple push of a button by adding the Kelley Digital Master Control Panel with HMI. As workloads increase, busy loading docks only get more complicated, making automating your dock equipment necessary in order to meet the demands. Managing your loading dock operation as an integrated system is key to ongoing dock safety. The digital master control panel requires dock workers to operate equipment through a guided sequence, minimizing operator error, training time for seasonal staff and turnover rates.



## DON'T JUST OBSERVE IT, LIVE THE EXPERIENCE.

Kelley leads the industry in specialty dock levelers, safety products and programmable control systems, offering a comprehensive portfolio of loading dock and warehouse solutions. We are delighted to invite you to our 6,000 square foot showroom, known as the Academy in Carrollton, Texas. The Academy gives you a very special opportunity to get to know our products in person. Gain hands on experience and enjoy one-on-one interaction with our engineering and manufacturing team in this state-of-the-art facility.

### CAN'T MAKE THE TRIP TO DALLAS?

Let our Mobile Academy come to you. Our 53' completely enclosed and temperature-controlled trailer features over 25 full-sized, fully-functional dock equipment demo units. Call 1-877-778-DOCK (3625) to schedule an appointment and we'll drive our solutions straight to your door.



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