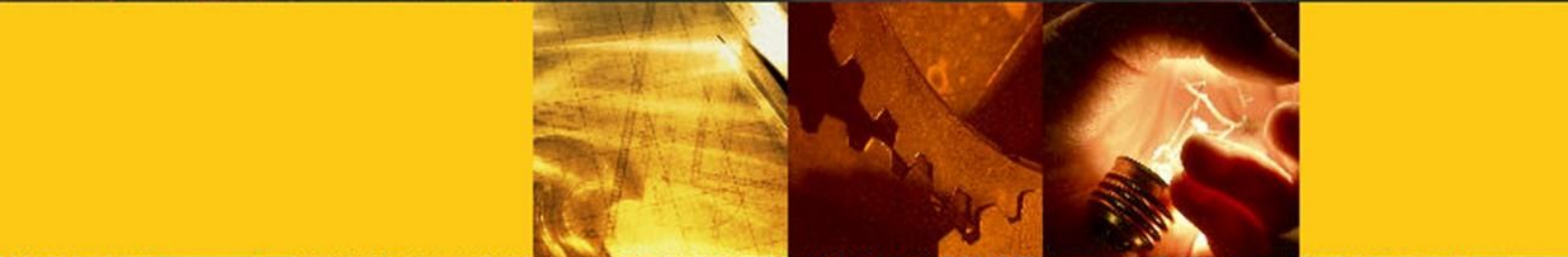




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PENNSY CATALOG

Pennsy Corporation

Franklin Corners

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How to use the Interactive Catalogue:

Our Catalog is simple to use. You can jump to the fact sheets for each part listed in the index; click on the image of the part you would like to know more about.




Click on the image for its corresponding page

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OUR PRODUCTS

Pennsy prides itself on the ability to tackle a railroad industry successful solution. We employ new polymer technologies forged metals that result in products of superior quality, long life, well as lower operating costs for our customers.

BRAKE COMPONENTS:

Heavy Duty Air Brake Hose Support Part# PN2457	Resilient Air Brake Hose Support Strap Part# PN2485	Bottom Rod Support Part# PN2508
		
Brake Hanger Wear Protector Part# PN1719.1	Brake Rod Bracket Wear Protector Part# PN2644 multiple lengths & dimensions available	Trainline Trolley Loop Part# PN1807

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Click here to return to the index pages

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OUR PRODUCTS

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BRAKE COMPONENTS:

Resilient Air Brake Hose Support Strap
Part# PN2485



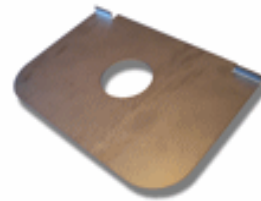
Heavy Duty Air Brake Hose Support
Part# PN2457



Bottom Rod Support
Part# PN2508 (31")
Part# PN2754 (44-1/4")



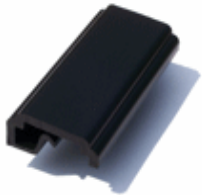
Brake Beam Strut Protector
Part# PN2432



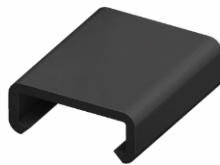
Forged Brake Shoe Key
Part# PN2701



Brake Hanger Wear Protector
Part# PN1719.1



Brake Rod Bracket Wear Protector
Part# PN2644
multiple lengths & dimensions available



Trainline Trolley Loop
Part# PN1807



Brake Rod Slider
Part# PN2321



Brake Beam Guide
Part# PN1511



Misner Lever
Part# PN2057 "24" & "18"



Brake Actuator Indicator
Part# PN2228



Brake Rod Truck Bolster Protector
Part# PN2505 & PN2646



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CAR BODY:

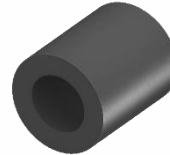
Plug Door Guide
Part# PN2000



Autorack Deck Plug
Part# PN1315
Part# PN1455



Uncoupling Lever
Bracket Filler
Part# PN2726



Autorack:

Autorack Panel Corner
Protector
Part# PN2699



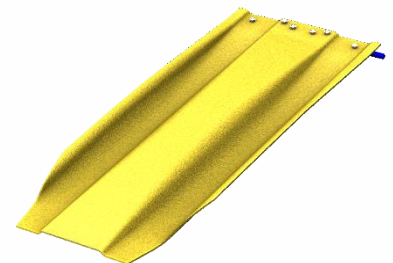
Autorack Side
Screen Protector
Part# PN2715



Door Edge Protection
Push-in Fastener
Part# PN2736



Autorack Bridge Plate
Part# PN2730
Part# PN2734



COUPLER:

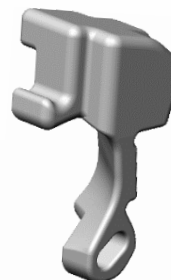
Knuckle Thrower
Part# PN5602 (E30A-DI)
Part# PN5610 (F31)



C-10
Knuckle Pin
Part# PN5400



Knuckle Lock
Part# PN5500 (E42-DI)
Part# PN5510 (F41A-DI)



Locklift
Part# PN5300 (E24B)
Part# PN5310 (F7)



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COUPLER:

Coupler Training Tool
Part# PN2738



Coupler Carrier Wear Plate
Part# PN2500 (Non-metallic)
Part# PN2759 (Manganese)



Locomotive Coupler
Alignment Block
Part# PN1024



TRUCKS/BOGIES:

Pedestal Roof Liner
Part# PN2545



Durabowl LT Polymer
Center Bowl Wear Liner
16" X 2" 16" X 2-1/4"
Part# PN1563 Part# PN1565



Durabowl LT Polymer
Horizontal Wear Liner
16" 14"
Part# PN2529 Part# PN2531



CHOCKS:

Adjustable Handle Safety
Wheel Chock
Part# PN2434



Angled Long Handle
Wheel Chock
Part# PN1739



Standard Long Handle
Wheel Chock
Part# PN1033



Heavy Duty
Wheel Chock
Part# PN1037



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SAFETY:

Light Weight Rerailer
(Set) 90 to 155lbs rail
Part# PN2676



Outside Rerailer
Part# PN2594



Inside Rerailer
Part# PN2592



Rerailer Clamp
Part# PN2597



Rerailer Wedge
Part# PN2599



Loco Rerailer Carrier
Part# PN2670



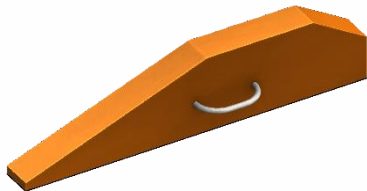
Single Hook Carrier
Part# PN2674



Rope Carrier
Part# PN2672



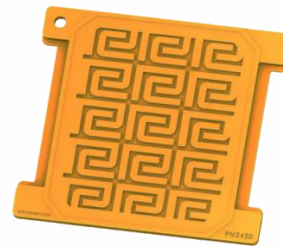
Polymer Rerailer
Part# PN2752



Intermodal Railcar
Hitch Barrier
Part# PN1959



Jack Pad
Part# PN2450



Lumber Corner
Protector
Part# PN1466



MISC:

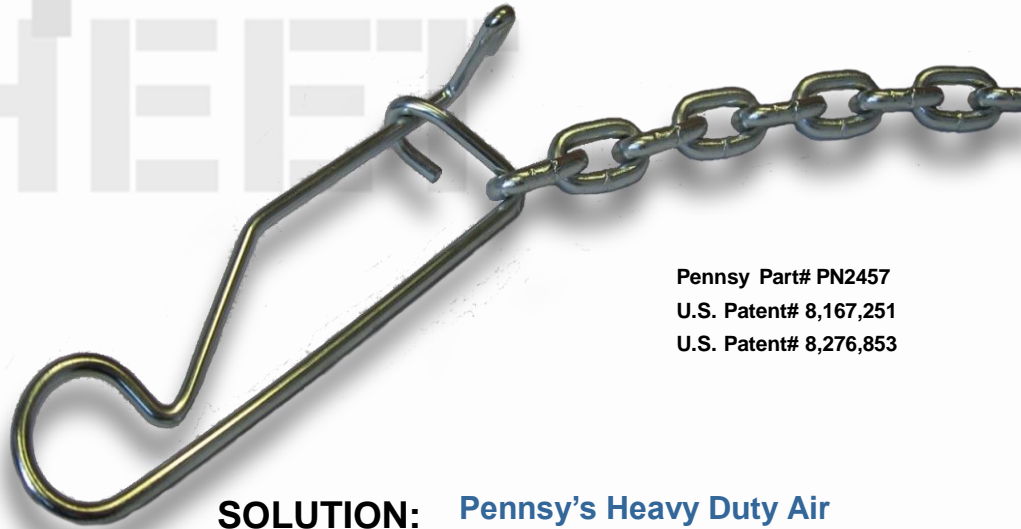


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FACT SHEET

AAR S-4006-08

Heavy Duty Air Brake Hose Support



Penny Part# PN2457
U.S. Patent# 8,167,251
U.S. Patent# 8,276,853

PROBLEM:

Low-Grade Air Brake End Hose Supports Cannot Handle Railroad Demands Leading to Replacements, Adjustment Costs and Train Delays

Not all air brake hose supports are created equal, a statement made evident in railroad revenue service where inadequate supports frequently fray, tear, and fail leading to more than \$15 million per year to the industry in adjustment and replacement costs. The failures result from a combination of environmental degradation in service and from peak loading typically associated with uncoupled hose flailing.

More stringent AAR specifications have necessitated a new generation of supports and attachment mechanisms specifically designed with higher performance in mind. This improved performance must come without sacrificing ease of installation and adjustment.

SOLUTION: Penny's Heavy Duty Air Brake End Hose Support

Penny's heavy duty air brake hose supports with EZ-Adjust railroad-grade clips increase performance – decreases AAR billing costs.

Penny's new hose support was specifically designed to meet or exceed the demands of the AAR's revised testing specifications and the needs of the rail industry. A durable steel chain eliminates frayed cables and failed rubber strap materials. The strongest attachment clips in the industry make it simple to install and reconfigure as needed. The result is a more durable support that will last longer and not require height adjustments.

RESULTS:

- Exceeds AAR S4006-2008 Testing Requirements
- Durable, Non-stretching Chain Virtually Eliminates Hose Height Adjustments
- Railroad-Grade Attachment Clips – Strongest in the Industry
- Impervious to Ozone Degradation
- Fewer Hose Separations and Train Delays Yields Potential Net Velocity Increases
- Decreased Hose Support Maintenance and Replacement Costs

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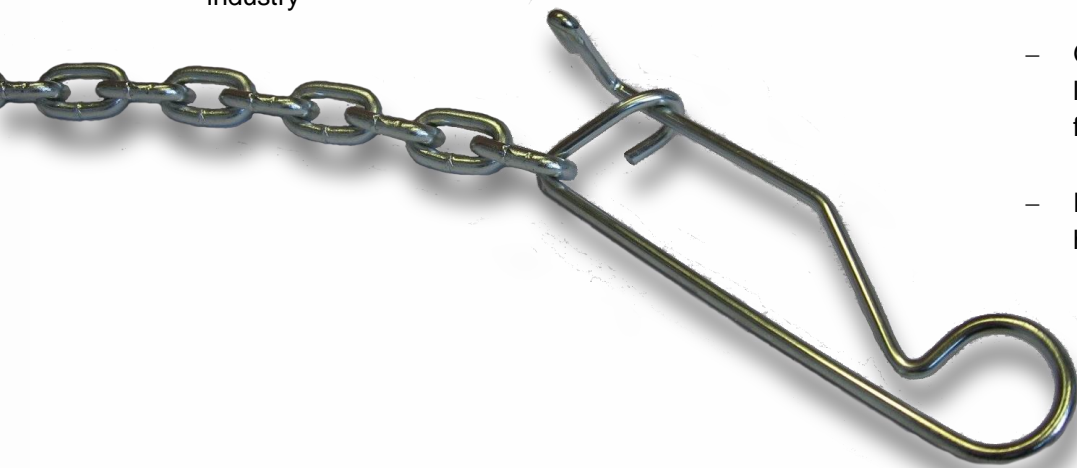


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Railroad-Tough Support

Tested Tough

- Meets or exceeds all AAR S-4006-2008 Requirements
- Strongest clips available in the industry



Railroad-Grade Heavy Duty Clips

- Patented clip design provides extreme durability
- Gladhand R-Clip resists rotation and lateral loading – a common cause for clip failure.
- Easily installed and adjusted with a gloved hand



The Pennsy Heavy Duty Air Hose Support offers superior performance for the harshest of

Durable Steel Chain

- Zero stretch – virtually eliminates costs for hose height adjustments
- Longer lasting than rubber and cable supports - reduces AAR Job Code 1165 expenses
- Impervious to environmental and temperature extremes
- Overcomes safety hazards associated with frayed cable supports

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FACT SHEET

AAR S-4006-08

Approved



Penny Part# PN2485

Patent# 8,276,853

Patent# 8,167,251

Resilient Air Brake Hose Support

SOLUTION:

Penny's Resilient Airbrake Hose Support

PROBLEM:

**Low-Grade Air Brake Hose Supports
Cannot Handle Severe Railroad
Demands Leading to Replacements,**

Not all air brake hose supports are created equal, a statement made evident in railroad revenue service where inadequate supports frequently fray, tear, and fail. Each year adjustments, replacement costs and train delays cost the industry more than \$15 million per year. Typical failures are due to environmental degradation and from peak loading typically associated with uncoupled hose flailing.

The more stringent AAR S-4006.2008 specification has necessitated a new generation of supports and attachment mechanisms specifically designed with higher performance in mind. This improved performance must come without sacrificing ease of installation and adjustment.

Penny's Resilient Polymer Air Brake Hose Support With EZ-Adjust Railroad-Grade Clips Increases Performance and Decreases AAR Billing Costs and Train Delays.

Penny's new Resilient air hose support was designed specifically to exceed the demands of the AAR's revised testing specifications. The body of this unique polymer support provides resilience never seen before in an air hose support. It will return to its original shape even after stretching 8+ inches and lifting 360 pounds and will maintain this excellent elasticity down to approximately -40C! It also eliminates the hazard of frayed cables and greatly outperforms environmentally unstable rubber strap materials. The strongest attachment clips in the industry make it simple to install and adjust as needed. The result is a more durable support that will last longer and not

RESULTS:

- Exceeds AAR S4006-2008 Testing Requirements
- Resilient Polymer Stretches, Cushioning Hose Flaying.
- Durable Polymer Returns to Original Shape after Stretching, Virtually Eliminates Hose Height Adjustments.
- Maintains elasticity down to -40C.
- Railroad-Grade Attachment Clips – Strongest in the Industry
- Fewer Hose Separations and Train Delays Yields Potential Net Velocity Increases
- Decreased Hose Support Maintenance and Replacement Costs

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Railroad-Tough Support

Tested Tough

- **Exceeds all AAR S-4006-2008 Requirements**
 Max Load Test; 360lbs, 8.4" stretch, with less than 0.25" permanent set
 - Permanent Set; 0.5" Elongation, 0" permanent set
 - Ozone testing; ASTM D1149 @ 20% elongation; Pass, No cracking
- **Able to stretch 10+” and lift 500+lbs without breaking**

Railroad-Grade Heavy Duty Clips

Patented clip design provides extreme durability

Patented clip design allows for maximum loading

Strongest clip available in the industry

Gladhand R-Clip resists rotation and lateral loading – a common cause for clip failure.

Easily installed and adjusted with a gloved hand



Durable, Flexible Polymer

Flexible – Provides cushion to flaying hoses.

Durable – Close to zero permanent set virtually eliminates costs for hose height adjustments

Longer Lasting than Rubber and Cable Supports - Reduces AAR Job Code 1165 expenses

Impervious to environmental and temperature extremes; maintains elasticity down to ~-40C.

Overcomes safety hazards associated with frayed cable supports

The Pennsy Resilient Air Hose Support offers superior performance for the harshest of applications



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FACT SHEET

Bottom Rod Safety Support

PROBLEM:

If a bottom rod connection fails there is potential for a train derailment.

In the past, derailments from failed bottom rod connections have resulted in the Association of American Railroads' mandating bottom rod safety supports per AAR Interchange Rule 10.

Failures can occur from an improperly applied, broken, or worn out cotter pin.

SOLUTION:

Pennsy's Bottom Rod Safety Support

Truck bottom rod safety supports are required on trucks that have brake rods which pass underneath the truck bolster.

The Pennsy Bottom Rod Safety Support is manufactured from galvanized steel braided cord with a galvanized hook that allows for quick and easy application.

This support can hold a static load greater than 1200 pounds, well in excess of AAR requirements, and easily survived the 200 pound 1,000 cycle drop test.



Pennsy Part# PN2508



RESULTS:

- Easy application and removal in all weather conditions
- Exceeds AAR Specification S-399-92
- High strength braided cable that can hold in excess of 1200 pounds.
- Exceeds the 200 pound 1,000 cycle drop test
- Six segments allow for multiple length adjustments
- Lab and field testing have proven longevity and performance

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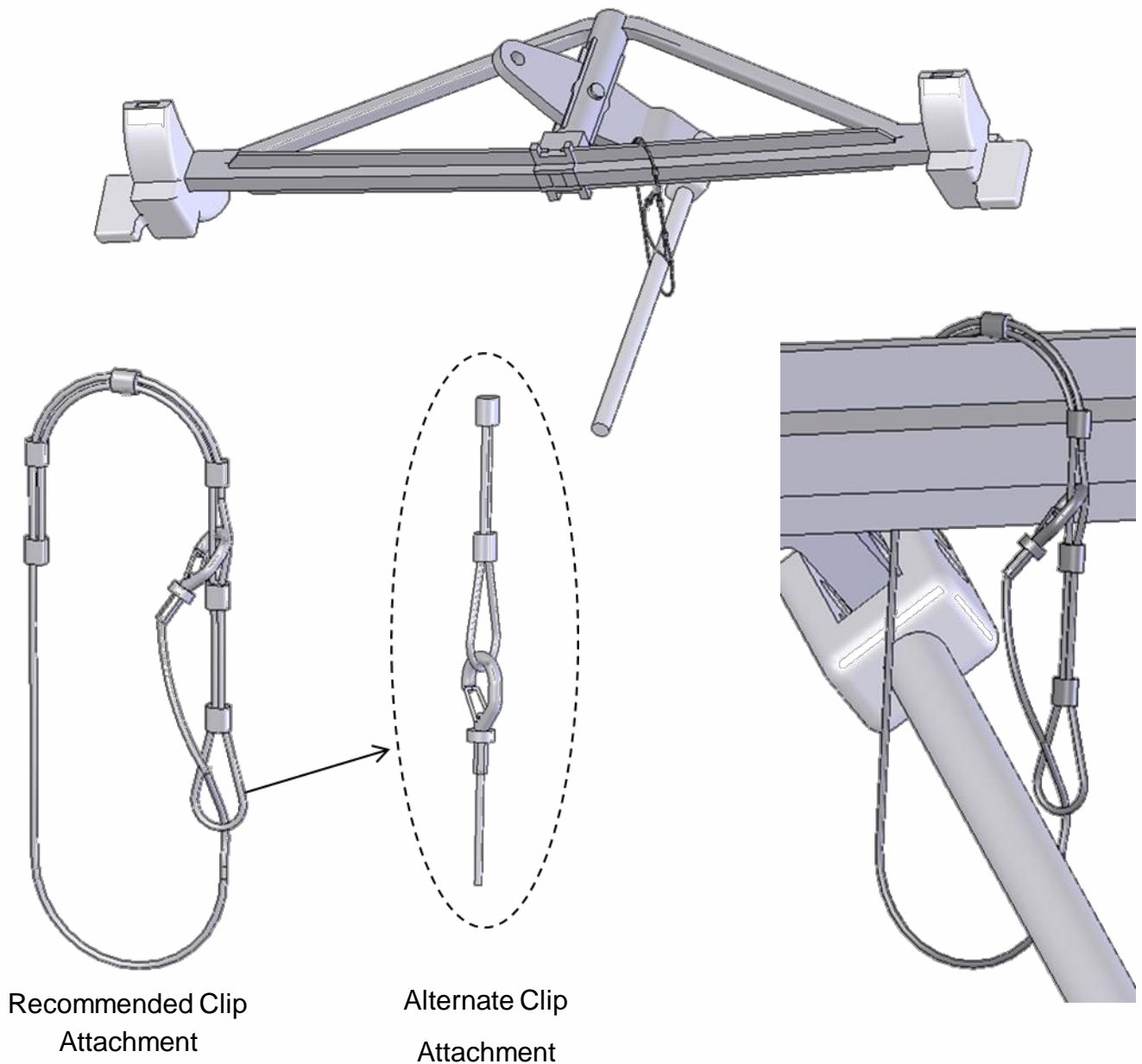
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Application Instructions

Pennsy Part# PN2508



Pennsy Bottom Rod Support Application Instructions

1. Follow all applicable safety rules.
2. Wrap Pennsy Bottom Rod Support PN2508 over brake beam and under brake bottom rod.
3. Engage bottom rod support clip into one of the six adjustment positions to obtain the least amount of slack.

Note: It is recommended to feed the clip through the end loop whenever length allows and on all shorter adjustments

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Brake Beam Strut Protector



Penny Part# PN2432

Patent Pending

PROBLEM:

1/8" Or More Wear On The Brake Beam Strut Necessitates The Costly Replacement Of The Brake Beam Assembly

Rule 6 of the AAR Interchange Rules requires that brake beam struts that exhibit 1/8" or greater lever slot wear must be replaced. Wear results from a combination of lever movement during brake operation and vibrational impacts at the point of contact between the lever and the strut.

Typically when a strut is found to be worn, the entire brake beam and strut assembly is replaced as a unit – a repair that costs over \$200* in labor and materials plus the cost for transport and out-of-service time for

SOLUTION:

Penny's Brake Beam Strut Protector

The Penny Brake Beam Strut Protector is a specially-designed product that is installed between the brake lever and the strut, thus eliminating direct contact between the lever and the bearing surface on the strut.

Testing has shown the Penny Brake Beam Strut Protector to have a wear potential that is approximately double that of an unprotected strut slot. In the event the Strut Protector becomes worn or damaged, it can be quickly and easily replaced without special tools and at a fraction of the cost to replace a brake beam.

The Penny Brake Beam Strut Protector can be installed on both new and existing brake struts, effectively eliminating slot wear on new brake beam struts and preventing further wear on partially worn struts.**

RESULTS:

- Low cost preventive maintenance on new brake beam struts
- Low cost repair on partially worn struts
- Can be replaced an indefinite number of times on the same strut.
- No special tools required for installation

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Extend Brake Beam Service Life



Fits #18 and #24 Brake Beams

- Universal design fits most manufacturer's struts
- Works with Straight, S-bend and Hook & Eye brake lever arrangements
- Effectively eliminates the problem of worn strut slots thereby extending strut service life

Simple & Fast Installation

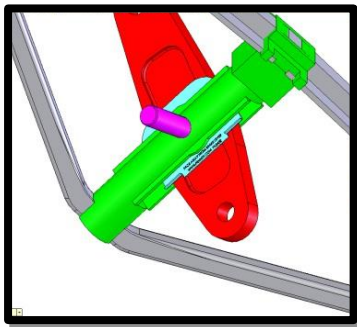
- Remove pin retaining clip/cotter pin and slide and partially remove strut pin
- Slide protector between lever and strut aligning center hole with strut pin hole
- Re-insert strut pin and replace retaining clip/cotter pin
- No special tools needed - No jacking of car



Fits New and Partially Worn Struts

- Prevents slot wear on new brake beam struts
- Halts wear on previously worn strut slots***

The Pennsy Brake Beam Strut Protector eliminates wear between the strut and brake lever thus reducing the frequency of brake



**Amounts based on figures published in the 2008 AAR Office Manual of Interchange Rules

***Does not repair already-condemned struts with 1/8" or greater wear

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FACT SHEET

Forged Brake Shoe Key

Information:

- Meets AAR S-376 material and dimensional requirements
- Forged for superior performance
- Compatible with tread guard brake shoes



Penssy Part# PN2701

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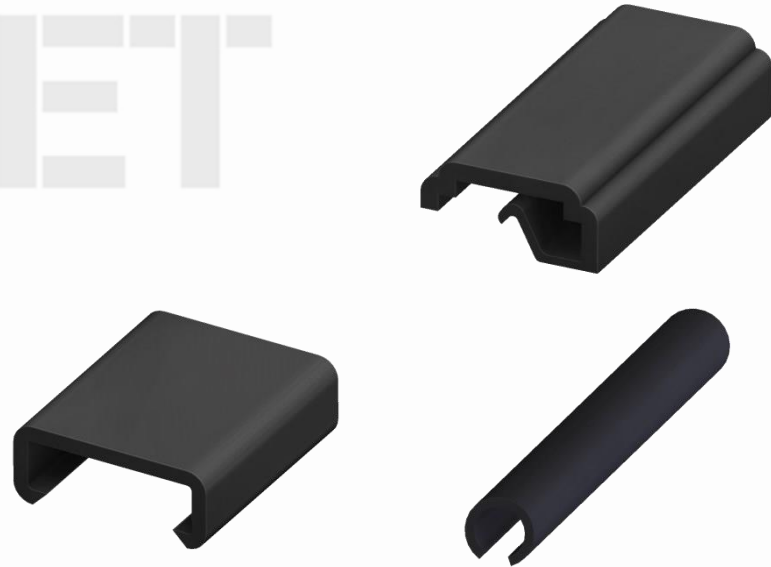
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FACT SHEET

Brake Rod Wear Protector



PROBLEM:

Brake Rod and Support Bracket Wear

When brake rods come in contact with support brackets, brake beams and bolsters, wear occurs and costly brake rod replacement or welding repairs

SOLUTION:

Pennsy's Brake Rod Protectors

The polymer chosen for Pennsy's wear liners has a low coefficient of friction and excellent wear properties.

Pennsy wear protectors are easily applied to brake rods or associated brackets, preventing wear and costly repairs.



RESULTS:

- Easy application and easy removal in all weather conditions
- Eliminates welding splices
- Variety of sizes and lengths are available
- Lab and field testing have proven longevity and performance

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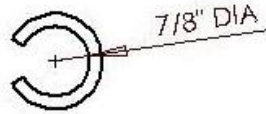
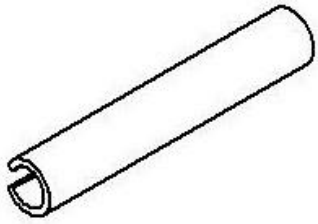


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Brake rod over bolster
Or

Brake rod through bolster

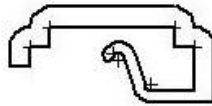
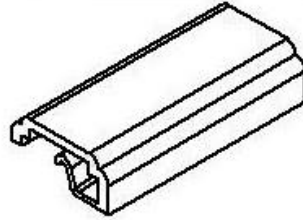
PN2646

25" Length

PN2505

27" Length

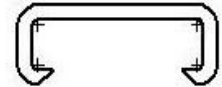
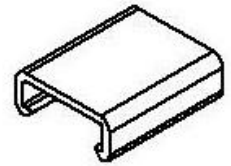
Tapered cut one end



PN1719

Fits 1½" wide by
¼-½" thick

Fits 2" wide by
¼-½" thick



PN2393

Fits 3" wide by
⅜" thick

PN2644

Fits 2" wide by
⅜-½" thick



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Trainline Trolley Shackle

PROBLEM: **Unintended Hose Separations**

Unintended air hose separations cause costly train delays. The use of larger 2" rings in the trainline trolley allows the air hose assembly to hang lower, increasing the potential for hose separations. Additionally, current metal rings wear against the trolley rod. When wear or damage occurs, the ring assembly arrangement is time-consuming to repair, and requires extensive welding and destruction of parts for even minor repairs.

SOLUTION: **Pennsy's Retrofit Loop**

Pennsy's Trainline Trolley features a long wearing polymer coating that eliminates all metal to metal contact, protecting the trolley rod, pipe and nipple assembly from wear. Pennsy's shackle also eliminates all welding and allows for easy air hose change outs and other repairs — all of which can be performed in the field. Pennsy's polymer has a low coefficient of friction, allowing for smoother movement during buff and draft, greatly reducing the likelihood of binding that can cause costly air hose separations.



AAR TESTING:

Pennsy's Retrofit Loop exceeds the AAR 3000# pull test requirement. During lab testing the current metal ring design needed to be replaced at 60,000 full travel cycles (16" travel). Pennsy's polymer lined retrofit loop showed only minimal wear at 150,000 cycles.

RESULTS:

- Reduced Trolley Maintenance — Polymer Liner Eliminates Rod and Ring Wear
- Exceeds 3000# AAR Pull Test
- Lower Coefficient of Friction Means Smoother Movement During Buff and Draft and Helps Alleviate Unintended Air Hose Separations
- Loop Maintains Proper Alignment During Buff and Draft Movements

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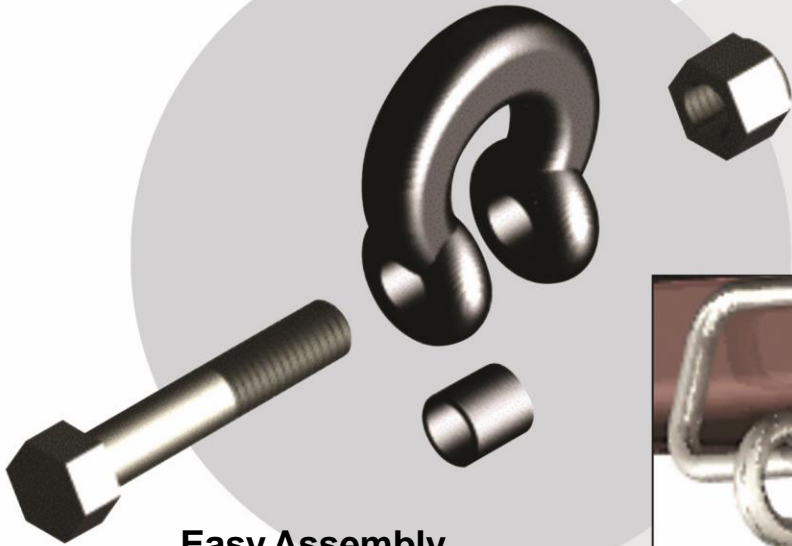
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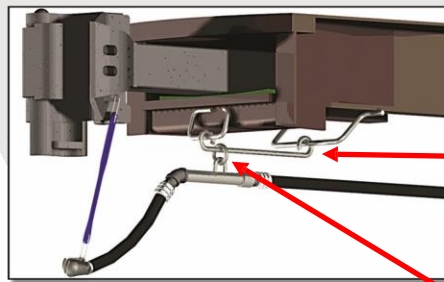
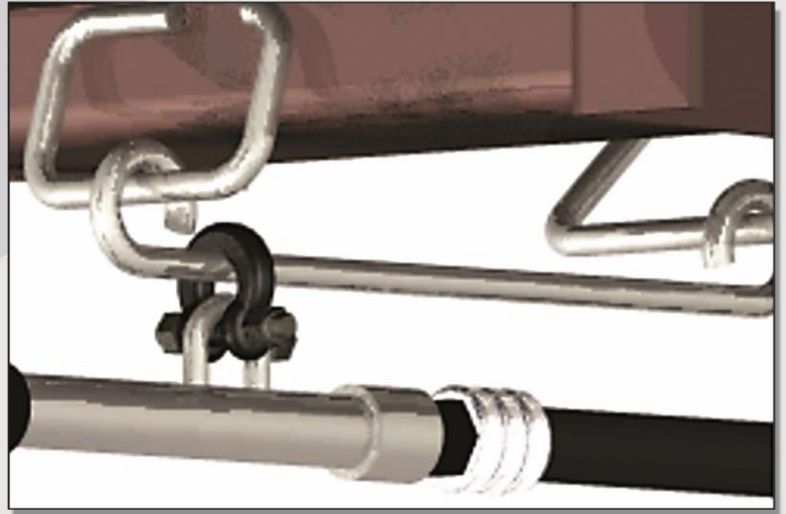
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Pennsy's Retrofit Loop Design



Easy Assembly

Replaces rings on existing trolleys. The new standard for the TTX "Universal Trolley."



Current Metal Ring Assembly

Trolley Rod

Metal Loop



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FACT SHEET

Handbrake Rod Slider



Pennsy Part# PN2321

PROBLEM:

High Wheel Wear on Cars with Side Sill Mounted Handbrake Rods

Certain double stack intermodal equipment, equipped with brakes operated by a side sill mounted handbrake rod system, have exhibited extremely high wheel wear on trucks. This handbrake system does not completely release the brake shoes on the inboard truck, resulting in high wheel wear.

The location with the highest friction is the brake rod riding on top of the side sill. This friction increases with increase in wear in the rod and rod cover.

SOLUTION:

Pennsy's Handbrake Rod Slider

A low friction, low wear polymer slider has been developed by Pennsy, for application to the handbrake rod. The slider provides improvements in friction reduction and resulting brake release.

Application of the Pennsy Slider requires no welding only basic tools to apply four slider fasteners.

The Pennsy Hand Brake Slider can be applied without shopping the car.

RESULTS:

- Significantly reduced friction in brake rigging
- Improved efficiency in resulting brake release
- Greatly reduced wheel wear
- Eliminated metal-to-metal contact and associated wear
- NO special tools required for application
- Easy field installation - NO shopping of car required



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The Pennsy

Handbrake Rod Slider:

- Reduces brake rod friction at contact points along side sill
- Installs simply in the field – no shopping of car
- Restores brake rigging release to like-new or better condition



Friction due to contact between brake rods and side sills can prevent brakes from fully releasing.



Without the Handbrake Rod Slider:

- Friction in handbrake rigging prevents complete brake release
- Dragging brakes dramatically shorten service life of wheels and brakes

The Pennsy Handbrake Rod Slider virtually eliminates friction in the brake rigging extending the life of brakes and wheels



These worn wheels resulted from brakes not releasing fully

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FACT SHEET

Brake Beam Wear Protector

PROBLEM:

Wear on the Brake Beam Wear Guide can lead to premature degradation of the side frame and the brake beam.

Excessive vibration and metal on metal contact can lead to premature degradation of the side frame and the brake beam.

SOLUTION:

The polymer chosen for Pennsy's Brake Beam Wear Guide has a low coefficient of friction, excellent cold flow resistance and ability to withstand high impact loads.

The part is easy to install, and extensive lab and field testing has proven that Pennsy's Brake Beam Wear Guide outperforms and outlasts all other brake beam wear protection products available on the market today.

Our Brake Beam Wear Guides can be used on new or restored brake beam guides.



Pennsy Part# PN1511

RESULTS:

- Low Coefficient of Friction, 0.27
- Excellent cold flow resistance withstands high pressure and eliminates extrusion, melting point >450F, heat deflection temperature >350F
- Easy pop-in installation
- Eliminates metal-on-metal contact, drastically reducing costly repairs
- Excellent wear resistance
- Lab and field testing have proven longevity and performance

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FACT SHEET

TMB Trigger Lever



PROBLEM:

Original trigger lever was metal to metal contact on regulator block, causing premature wear.

Original trigger lever pivot would wear and allow lever to lean, eventually allowing lever to fall behind ramp.

Original lever bird beak bearing would rust and fail.

SOLUTION:

Pennsy's TMB Trigger Lever

A large boss was added to pivot to prevent premature wear and keep lever in proper orientation.

A polymer roller replaces steel bearing, preventing corrosion and ramp wear.

A polymer cap prevents wear on ramp and guide.

#18 Brake Beam Trigger Lever – PN2059

#24 Brake Beam Trigger Lever – PN2057

RESULTS:

- Polymer roller eliminates rusted failed roller bearing, and also prevents ramp wear
- Large pivot boss maintains lever position for accurate slack adjuster setting for empty or loaded railcar and prevents lever locating behind regulator block
- Cap prevents regulator block wear
- Increases component life of empty/load system, reducing railcar maintenance and shop time

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FACT SHEET

Brake Actuator Indicator

**Pennsy Part# PN2228
U.S. Patent# 7,104,365****PROBLEM:****Brake Actuator Travel
Inspections Are Inaccurate or
Are Bypassed Completely**

The inaccuracy of current devices for inspecting the range of truck mounted brake piston travel and the additional labor related to this routine inspection frequently lead to an increase in unnecessary or inadequate brake adjustments or, in some cases, completely bypassed field brake inspections. Unnecessary adjustments can result in increased maintenance costs and premature wheel and brake wear. Inadequate adjustments and bypassed inspections create a potentially hazardous situation with underperforming braking systems.

SOLUTION:**Pennsy Brake Actuator**

The Pennsy Brake Actuator Indicator is a simple, cost-effective mechanism to enable instant identification of the need for brake system adjustment during inspections on TMB-equipped rail cars. It installs in minutes without tools or welding, and helps reduce the safety risks and increased maintenance costs resulting from improperly adjusted brakes.

RESULTS:

- Easy-to-read visual adjustment indicator saves on brake inspection times
- Indicator accuracy eliminates guesswork and unnecessary brake adjustments
- No Tool – No Weld installation saves on labor and eliminates railcar down time
- Innovative design maintains indicator accuracy independent of truck component wear and brake rigging slack/tension
- Advanced polymer construction is virtually indestructible and impervious to harsh railroad environmental conditions
- Simplified inspection process increases likelihood of thorough brake safety inspections

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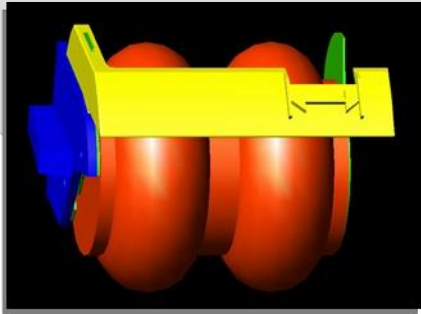
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Instant and Accurate TMB Piston Travel

- “Goal Post” travel indicators lose accuracy as components wear
- Indicators often become bent or damaged in use
- Require inspectors to crawl under



TMB Piston with “Goal Post” Piston Travel Indicator.



The Penny Actuator Indicator mounts securely without tools and without shopping the car.

- High Visibility – Easy to read without crawling under car
- Reduces inspection time and increases worker safety
- Durable and Corrosion-resistant



Easily readable indicator area makes inspection faster and safer.

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FACT SHEET

Plug Door Guide

PROBLEM:

Wear of Plug Door Tracks by Metal Rollers

Constant vibration causes metal rollers to wear through plug door tracks, resulting in costly weld repairs. In extreme cases, the metal roller can break through the track, causing the door to disengage resulting in a serious worker safety hazard. In addition, uneven roller wear degrades the operation of the box car door, making it more difficult to open and close.

SOLUTION:

Pennsy's Self-Lubricating Plug Door Guide

The large bearing surface of the Pennsy Polymer Guide protects the track from concentrated loading. The low friction material enhances door operation and eliminates the problems of weld repairs and door disengagement. For additional safety, Pennsy has embedded a metal insert in the polymer guide. The self-lubricating material combined with a coated steel pin provides smooth, corrosion free operation.



Pennsy Part# PN2000

RESULTS:

- Over 10 Years of Service Experience
- Eliminates Track and Roller Wear
- Costly Door Track Maintenance Reduced
- Worker Safety Enhanced by Secure Door Attachment
- Door Operation is Greatly Improved
- Embedded Metal Insert for Failsafe Operation

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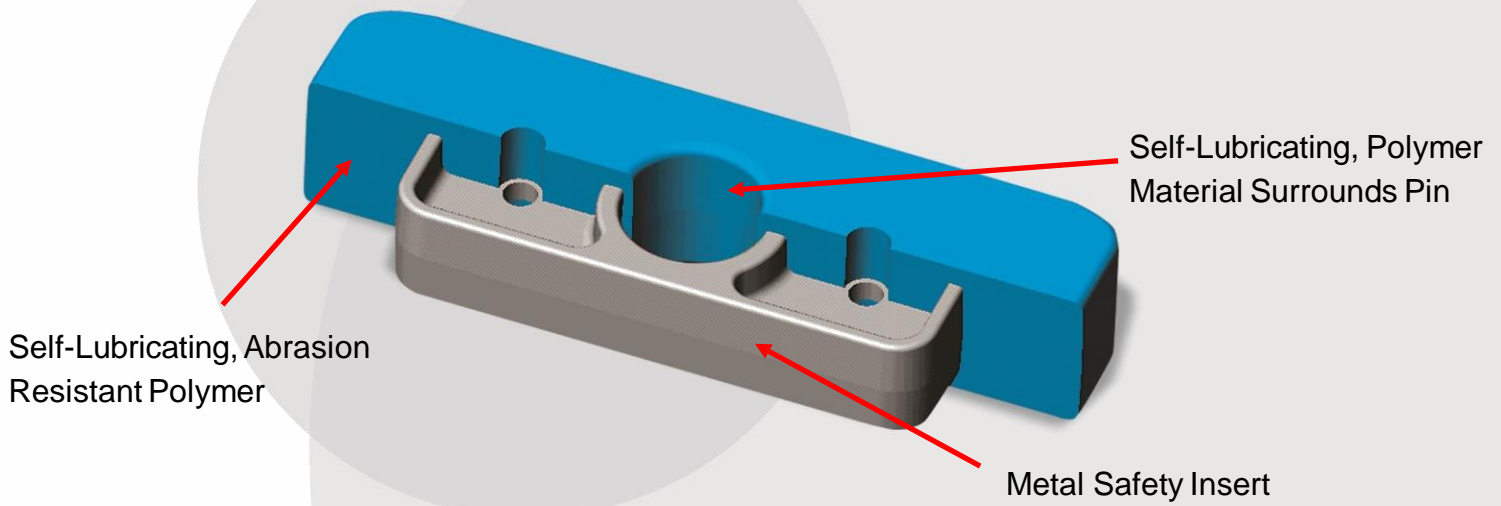


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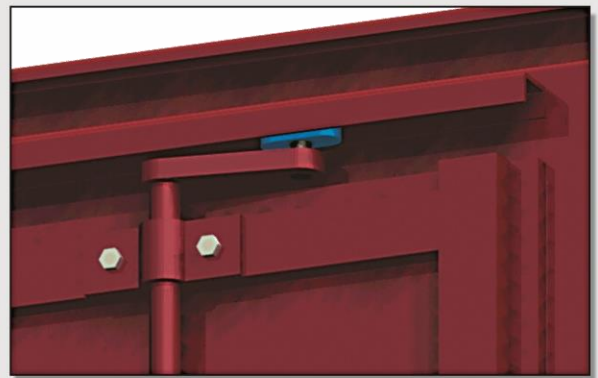
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Door Guide and Pin Application

Door Guide - **Part# PN2000**



Box Car Plug Door
Applied like a standard metal roller (no additional setup or tools required)



FACT SHEET

Autorack Deck Plug

PROBLEM:

Plugging holes in Autorack Decks

Holes in the decks of modified railroad autorack cars allow dust and dirt to enter the car from the track, settling on fresh automobile paintwork and damaging it. Welding metal patches over the holes is costly and resource intensive.

SOLUTION:

Pennsy's Deck Plug

Our innovative solution was designed from the ground up to save time and money when plugging holes in autorack decks. The rustproof plugs may be installed by one person working from the top of the deck. The low profile textured surface of the plug does not present a tripping or slipping hazard when installed. With over ten years field service experience the Pennsy Deck Plug has proven itself in a range of conditions, including withstanding snow removal.



Pennsy Part# 1455 – Single Hole Deck Plug



Pennsy Part# 1315 – Two Hole Deck Plug

RESULTS:

- Designed for one person installation
- Can be applied from within the car
- Textured surface slip proof
- Low profile not a tripping hazard
- Weather and rustproof
- Proven performance withstanding snow removal

FACT SHEET

Autorack Panel Corner Protector

PROBLEM:

When autorack panels are attached to their support brackets, the vibration causes wear. Panel protectors are needed as a means for tightly securing panels.

SOLUTION:

Pennsy's Autorack Corner Protectors

The polymer chosen for our Autorack Corner Protectors has a low coefficient of friction and excellent wear properties.

Pennsy wear protectors are easily applied to panels, preventing wear and costly repairs.

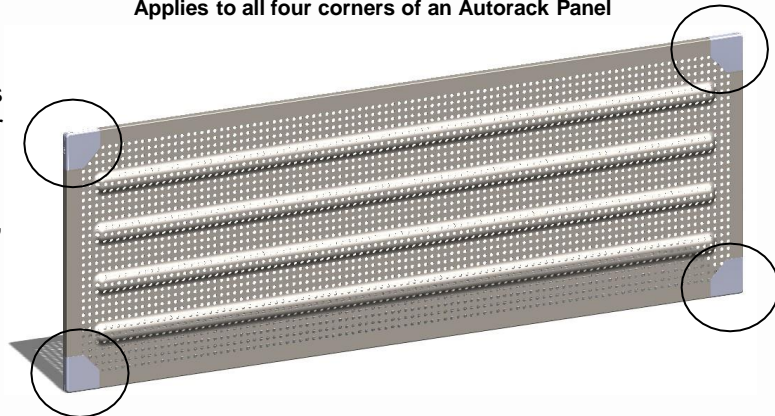
RESULTS:

- Easy application and removal
- Eliminates wear and vibration
- Lab testing has proven longevity and performance



Pennsy Part# PN2457

Applies to all four corners of an Autorack Panel

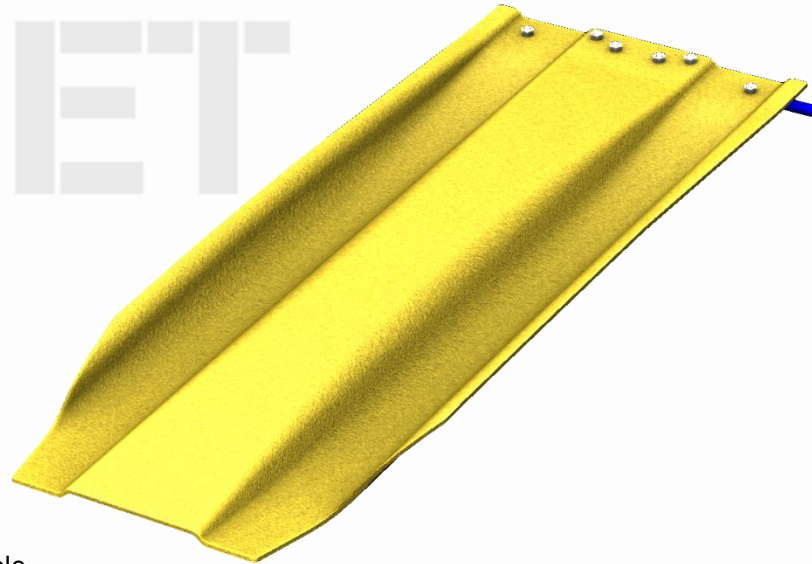




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FACT SHEET

Autorack Bridge Plate



Part# PN2730 (56" Length)
Part# PN2734 (53" Length)
Part# PN2730.2 (Hinge Only)

PROBLEM:

Safely and Efficiently loading and unloading Automobiles in Autorack Freightcars

- Bridge Plates are used to cross the gaps between autorack freightcars, and therefore must be strong, each plate being able to hold a 10,400 pound static load.
- The Bridge Plates must be portable enough to allow crews to carry up and install at the top decks of autoracks. The Autorack bridge plate must weigh 40 pounds or less.
- The riding surface of the Bridge Plate must have a durable anti-slip coating present. Worn or degraded anti-slip surfaces present a safety hazard.
- Current hinge designs degrade due to the demanding operating environment and are continually replaced.

SOLUTION:

Pennsy's High Capacity Bridge Plate

- Pennsy's High Capacity Bridge Plate is made from aerospace grade aluminum, one of the strongest in the market.
- Pennsy's bridge plate undergoes very little distortion when a load is applied to it. Competitor bridge plates distort greatly.
- Our aluminum is primed with an advanced E-coat primer, then a high-visibility anti-skid epoxy is applied to the running surface, which provides superior adhesion to the non-skid coating.
- Pennsy's High Capacity Bridge Plate features an improved hinge design that will provide a longer service life, and smoother operation.

AAR TESTING:

Pennsy's High Capacity Autorack Bridge Plate has been extensively tested to ensure safe operation. The Pennsy Bridge plate exceeded both the static load as well as the dynamic load requirements of AAR M-951.

RESULTS:

- High-visibility and durable anti-skid coating
- Exceeds M-951 Static and Dynamic load requirements
- Improved hinge durability
- Improved non skid coating adhesion
- 56" and 53" Lengths Available
- Less than 40lbs

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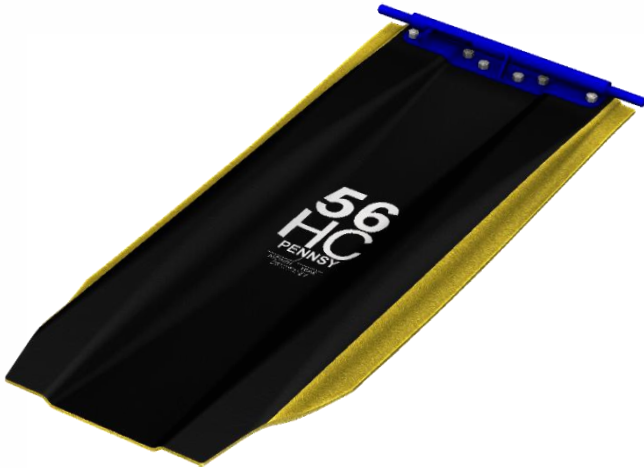
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Recommended Practices:

- Avoid contact with salt for extended periods of time, salt can cause corrosion and pitting of the Aluminum
- Wherever possible, store Bridge Plates out of the elements and in upright positions
- Regularly wash and inspect Bridge Plate for damage to the Aluminum, Hinge, or Anti-Skid coating
- Always follow and conform to recommended practices and safety rules mandated by your Railroad and the AAR

Refurbishing Bridge Plates

Anti-Skid Coating

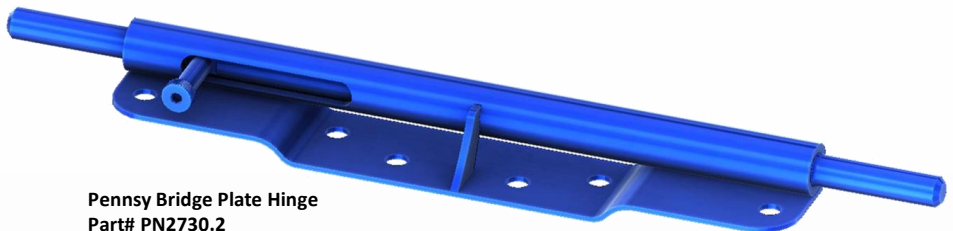
- Remove worn or degraded anti-skid coating with a media/grit blaster using non-metallic media
- Thoroughly wash Bridge Plate to remove any residue left from the media blast and prep surface
- Apply suitable primer to promote adhesion of the Anti-Skid paint*
- Apply Yellow Anti-Skid paint to running surface only**
- If needed, purchase and apply new Bridge Plate Decal (PN2730.3/PN2734.3)
- On the decal write "RF" and the date of refurbish with permanent marker

* Consult with coating manufacturer to determine proper primer/paint combination

** Follow coating manufacturer's instructions for temperatures, coating thicknesses, and curing time

Bridge Plate Hinge

- Remove latch shoulder-bolt to disassemble Bridge Plate Hinge and perform cleaning, use thread-lock adhesive on shoulder-bolt during reassembly
- When installing Hinges to Bridge Plate use Grade 8 fasteners only, torque bolts to 90ft-lbs
- Fasteners Required:
 - 6x - 1/2"-20 Hex Bolt 7/8" length
 - 6x - 1/2"-20 Distorted Thread Locknut



Pennsy Bridge Plate Hinge
Part# PN2730.2

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FACT SHEET

Coupler Training Tool

PROBLEM:

Lack of visibility of internal coupler components presents an issue when training and understanding the function.

- Coupler and Knuckle hinder visibility
- Pinch hazards of training with full scale
- Many critical contact points left unknown
- Components not color coded

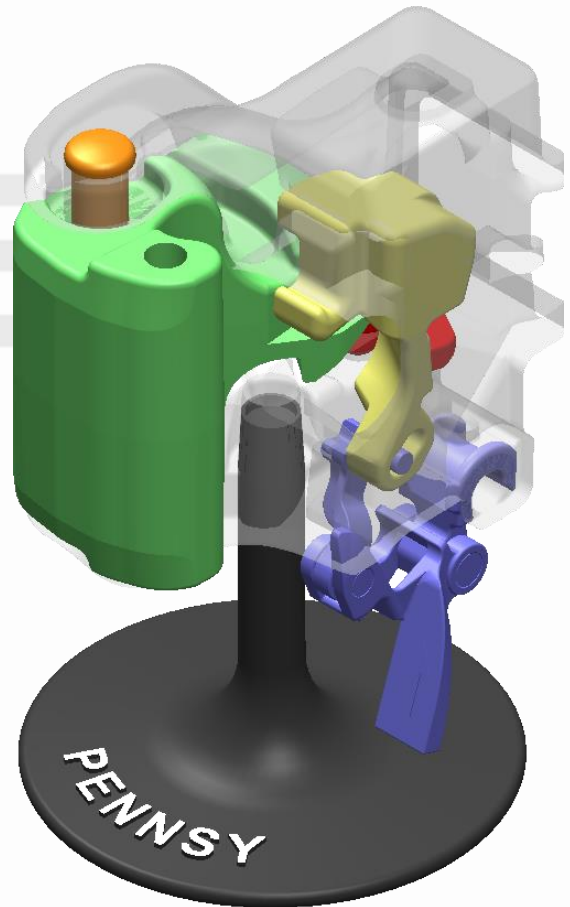
SOLUTION:

Pennsy's Coupler Training Tool

- Transparent Coupler Head, complete visibility of internal components
- No pinch or other safety hazards
- Mobile training tool
- Color coded components for easy differentiation



Check out a video of it in use on [YouTube!](#)



Part# PN2738

Assembly Includes:

- Knuckle
- Locklift
- Thrower
- Pin
- Lock
- Coupler Head (transparent)
- Model Base

Colors of parts shown may vary.

Additional Details:

- All components 3D printed at 1:3 scale
- 8" tall x 5" deep x 5" wide
- 1 lb.
- Based on standard E coupler components

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FACT SHEET

Coupler Carrier Wear Plate

PROBLEM:

Coupler shank and carrier wear

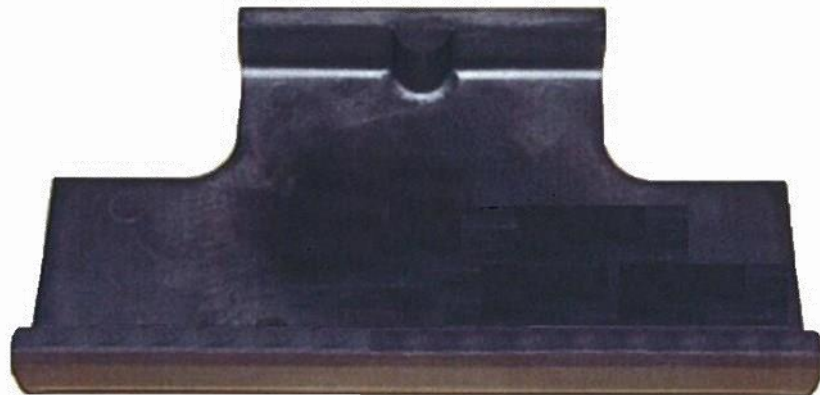
Vibration and metal on metal contact can lead to premature wear of the coupler shank and coupler carrier. Competitive polymer wear plates are soft and suffer from cold flow issues, which dramatically reduces the life of the part.

SOLUTION:

Pennsy's Coupler Carrier Wear Plate

The polymer chosen for Pennsy's Coupler Carrier Wear Plate has a low coefficient of friction, excellent cold flow resistance and ability to withstand high impact loads.

The part is easy to install and extensive lab and field testing has proven the Pennsy's Coupler Carrier Wear Plate will outperform and outlast all other polymer Coupler Carrier Wear Plate products available on the market today.



Non-Mettalic
PN2500 (1/2")
PN2746 (3/8")
PN2748 (5/8")

High Manganese
PN2759 (7/16")

RESULTS:

- Low Coefficient of Friction, 0.27
- Excellent Cold Flow Resistance withstands high pressure and eliminates extrusion, melting point >450F, heat deflection temperature >350F.
- Easy pop-in installation
- Eliminates Metal-on-Metal contact, drastically reducing costly repairs.
- Excellent wear resistance
- Eliminate coupler shank wear plates
- Lab and field testing have proven longevity and performance

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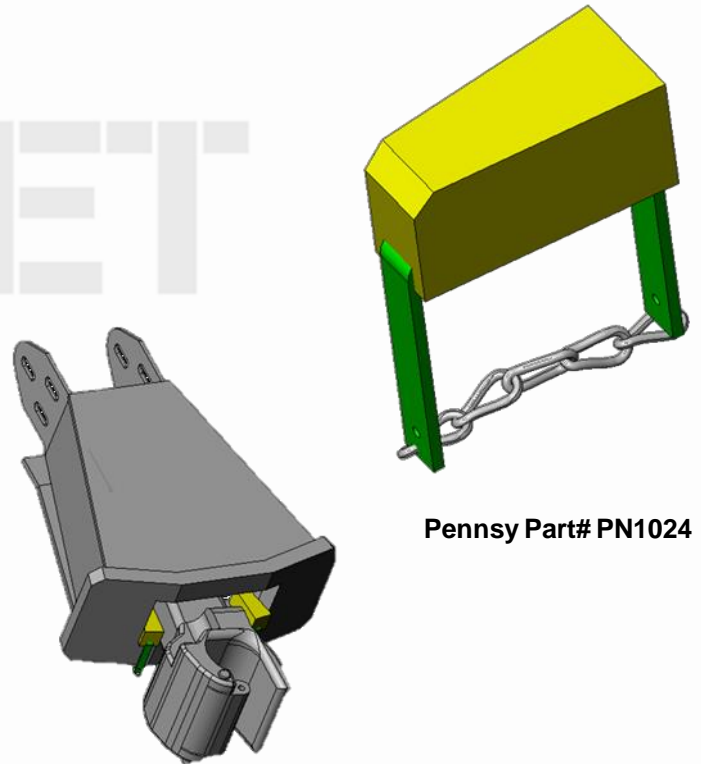
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FACT SHEET

Locomotive Alignment Block



Pensy Part# PN1024

PROBLEM:

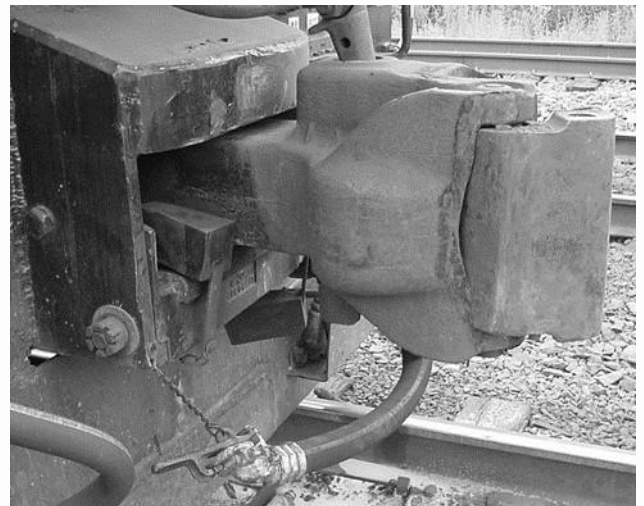
Excess Coupler Movement on Locomotives Without Coupler Alignment Control

Excessive coupler movement in many older switchers and locomotives without coupler alignment control can lead to increased potential for derailments during locomotive independent braking. Such braking can push the locomotive coupler into a jackknife position increasing the likelihood for

SOLUTION:

Pensy's Locomotive Alignment Block

The Pensy Locomotive Alignment Block is a simple, proven device that restricts lateral coupler movement on locomotives without coupler alignment control thus reducing the risk of derailment during locotive braking. Made from advanced polymers, the alignment block easily withstands the harsh railroad environment and installs in minutes using only



- Restricted lateral coupler movement reduces potential for derails during locomotive independent braking
- Proven design stands up to tough service
- Simple installation and removal with basic hand tools – On and Off in Minutes

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FACT SHEET

Uncoupling Lever Bracket Filler

PROBLEM:

Vibration and daily usage of uncoupling levers can cause wear on the cotter pins which secure the system. A damaged cotter pin can lead to failure or improper operation of the uncoupling lever system.

SOLUTION:

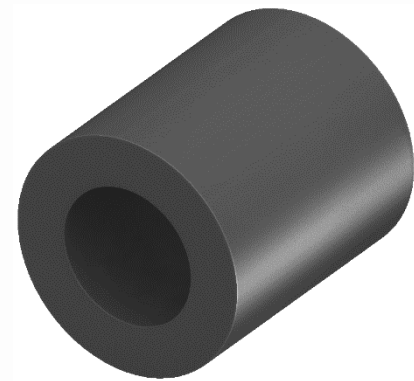
Pennsy's Uncoupling Lever Bracket Filler

The addition of Pennsy's Uncoupling Lever Bracket Filler protects the cotter pin by reducing vibration and wear within the uncoupling lever system.

The installation of Pennsy's Uncoupling Lever Bracket Filler follows **Rule 22 of AAR requirement job code 2484.**

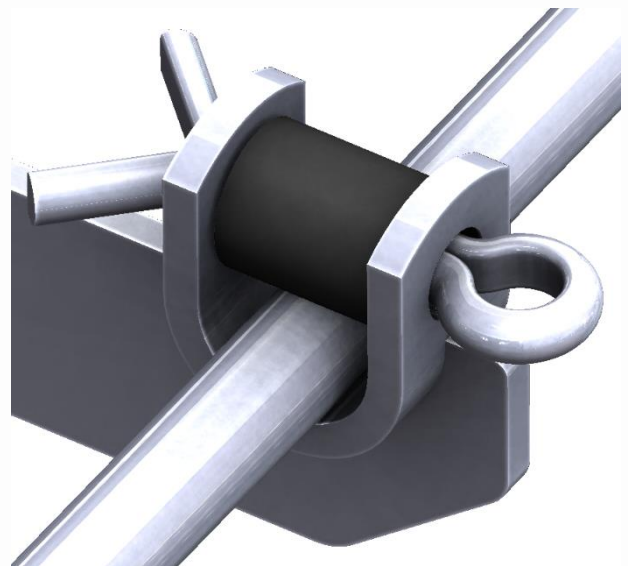
RESULTS:

- Wear resistant polymer, -85°F to 176°F operating temperature.
- Eliminates corrosion that can damage the uncoupling lever system.
- Low cost and easy to install solution that prevents damage to the uncoupling lever.



Pennsy Part# PN2726

Applies to 1/2" cotter pin on uncoupling lever bracket



FACT SHEET

Thrower Arms Locks

PROBLEM:

Poor quality and wear can cause the Thrower Arm to function poorly or break

- Excess wear can impede the thrower arm from opening the coupler knuckle
- Poor casting quality can create fit issues and prevent smooth operation of the coupler
- Poor material quality can cause premature failure of the thrower arm

SOLUTION:

Pennsy's line of Thrower Arms

To ensure proper function and universal fit in interchange, Pennsy's line of Thrower Arms were designed using 3-D scans of a multitude of Throwers and Coupler bodies

Thrower Arm dimensions and material properties are routinely checked to verify product conformity



Pennsy Parts:
PN5600 — E30 Thrower Arm
PN5610 — F31 Thrower Arm

RESULTS:

- Thanks to Pennsy's database of scanned coupling components and quality control system, Pennsy avoids many of the fit issues found in the field
- Pennsy's strict material controls prevent premature failures in the Thrower Arm
- All Pennsy products are clearly marked and identifiable



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FACT SHEET

Knuckle Locks



Penny Parts:
PN5500 — E42 Knuckle Lock
PN5510 — F41 Knuckle Lock

PROBLEM:

Poor quality and worn Knuckle Locks create issues with the coupling system

- Excess wear can cause coupler slop and slack action, which may damage other components
- Poor casting quality can create fit issues and prevent smooth operation of the coupler
- Fit issues during assembly of couplers force carmen to grind surfaces on the lock and knuckle

SOLUTION:

Penny's line of Knuckle Locks

To ensure universal fit Penny's knuckle lock was designed using 3-D scans of a multitude of Locks, Couplers, and Knuckles found in interchange.

Lock dimensions and material properties are routinely checked to verify product conformity.

Penny's proprietary material has greater wear resistance than the standard steel.

RESULTS:

- Due to Penny choice in material, the lock will not wear as quickly and will also prevent wear on the coupler and knuckle.
- Thanks to Penny's database of scanned coupling components and quality system, Penny avoids many of the fit issues found in the field.
- Penny lock design and improved wear characteristics prevent coupler slop, which will help prevent premature failure of Knuckles and Coupler bodies
- Penny's Knuckle Locks are proudly made in the USA

FACT SHEET

C-10 Knuckle Pin



Pennsy Part# PN5400

Information:

- Meets AAR M-118 mechanical requirements:
 - Tensile strength (ksi) 146
 - Yield strength (ksi) 90
 - Elongation (%) 16.5
 - Reduction in Area (%) 46.2
- Standard C-10 Knuckle Pin
- Machined to exceedingly tight tolerances to ensure a perfect fit every time.
 - Machined straight within 0.050"
 - Diameter held within +0.015"/-0.023"



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FACT SHEET

Durabowl

M-976 APPROVED



PROBLEM:

Applying Lubricants To The Centerbowl Does Not Work

High bearing pressure extrudes both lubricants and normal non-metallic liners from the centerbowl, leaving metal-on-metal contact. The result is poor curving performance and accelerated wheel and track wear. In extreme cases, track rollover and car derailment can occur.

SOLUTION:

Pennsy's Durabowl

The Durabowl's rugged high grade polymer was chosen for its low coefficient of friction, excellent cold flow resistance and ability to withstand high impact loads. It's easy installation eliminates the time-consuming process of welding dissimilar metals. Extensive lab and field testing has proven the **Durabowl** outperforms and outlasts all other centerplate wear protection products available on the market today.

RESULTS:

- Low Turning Resistance Improves Curve Negotiation; Coefficient of Friction 0.27
- Cold Flow Resistance Withstands High Bearing Pressure and Eliminates Extrusion
- Easy Drop-in Installation
- Eliminates Metal-on-Metal Contact, Drastically Reducing Costly Repairs.
- Lab and Field Testing Have Proven Longevity and Performance

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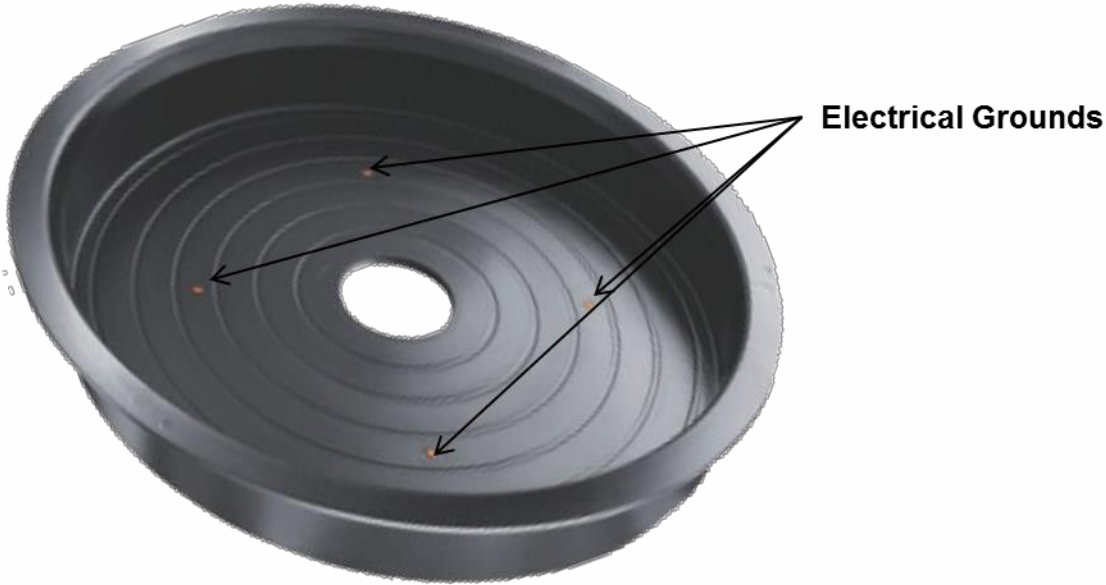


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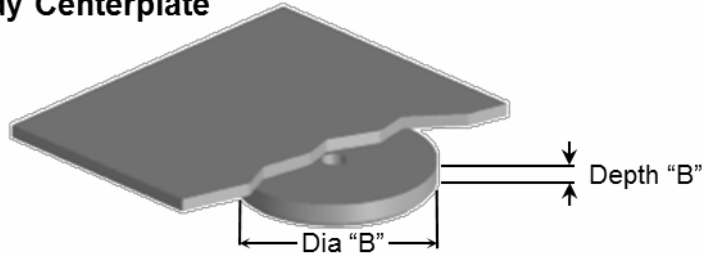


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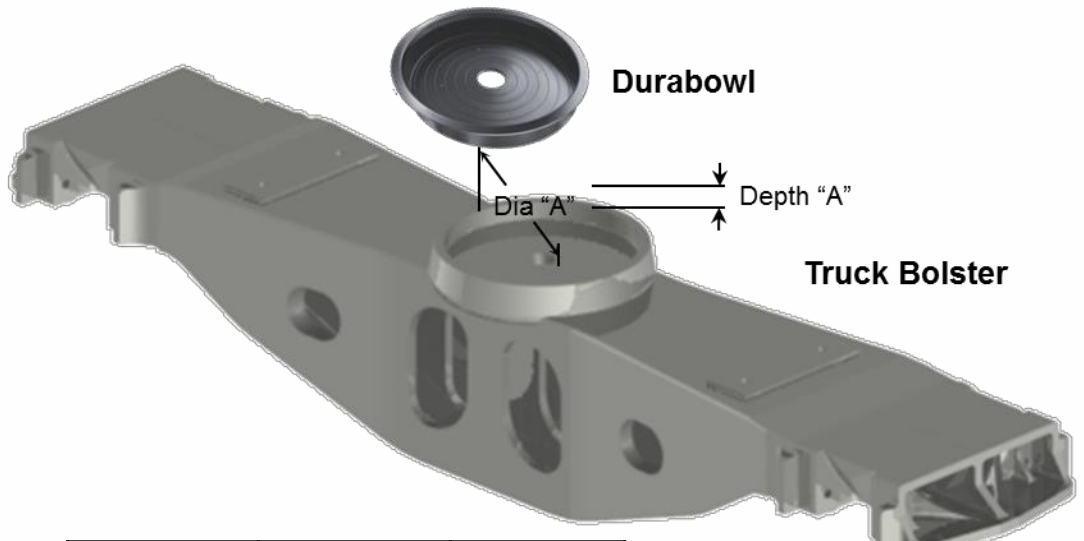
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Body Centerplate



Durable Applications



Specifications:

- Color: Black
- AAR Approved

DURABOWL SIZE	DURABOWL PART NO.	APPLICA-TION DRAWING
16" x 2" STD	PN1563	PN1567
16" x 2-1/4" BN	PN1565	PN1567

Notes: 1. REFER TO AAR SPEC. S-308 FOR DIMENSIONS AND TOLERANCES OF BOLSTER CENTERPLATE BOWLS
 2. REFER TO AAR SPEC. S-206 AND S-207 FOR DIMENSIONS AND TOLERANCES OF BODY CENTERPLATES

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FACT SHEET

Durabowl ***Horizontal Liner***



PROBLEM:

Applying Lubricants To The Centerbowl Does Not Work

High bearing pressure extrudes both lubricants and normal non-metallic liners from the centerbowl, leaving metal-on-metal contact. The result is poor curving performance and accelerated wheel and track wear. In extreme cases, track rollover and car derailment can occur.

SOLUTION:

Pennsy's Durabowl - Horizontal Liners

The Durabowl's rugged high grade polymer was chosen for its low coefficient of friction, excellent cold flow resistance and ability to withstand high impact loads. It's easy installation eliminates the time-consuming process of welding dissimilar metals. Extensive lab and field testing has proven the **Durabowl** outperforms and outlasts all other centerplate wear protection products available on the market today.

RESULTS:

- Low Turning Resistance Improves Curve Negotiation; Coefficient of Friction 0.27
- Cold Flow Resistance Withstands High Bearing Pressure and Eliminates Extrusion
- Easy Drop-in Installation
- Eliminates Metal-on-Metal Contact, Drastically Reducing Costly Repairs.
- Lab and Field Testing Have Proven Longevity and Performance

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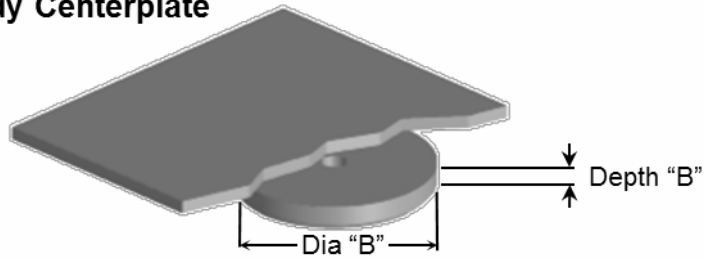
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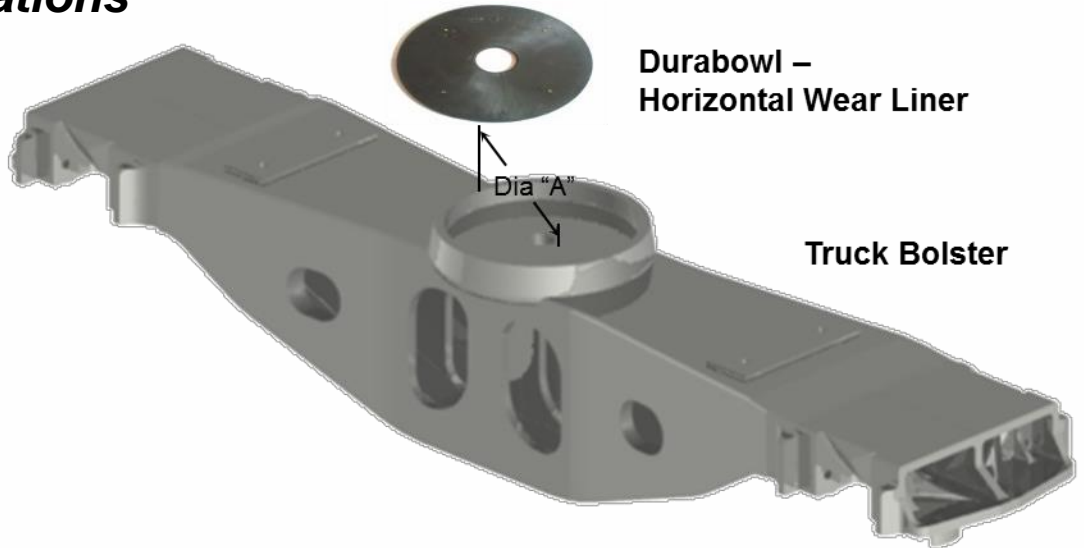


Electrical Grounds

Body Centerplate



Durable Applications



Durabowl – Horizontal Wear Liner

Truck Bolster

DURABOWL HORIZONTAL Dia. A	PART NO. 1/4" Thick	PART NO. 1/8" Thick
16" STD	PN2529	PN2678
14" STD	PN2531	PN2680



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FACT SHEET

Pedestal Roof Liner

PROBLEM:

Wear on the pedestal roof can lead to premature degradation of the side frame. Current wear liners have a short product life.

Metal on metal contact can lead to premature degradation of the pedestal roof. Current wear liners crack and break easily. The FRA mandates that cracked and broken wear liners must be replaced.

SOLUTION:

Pennsy's Pedestal Roof Liner

Pennsy has designed a Pedestal Roof Liner that has higher elongation and is less brittle than competitive liners currently available.

By studying failure modes in the field and continuing our research using FEA analysis, Pennsy has selected a material with properties ideal for a pedestal roof liner.

Superior material selection has enabled our liner to outperform and outlast all other competitive pedestal roof liners. Laboratory fatigue testing in the vertical and lateral direction have confirmed our claims.

Pennsy's Pedestal Roof Liner can be used on new



**Pennsy Part# PN2545
U.S. Patent# 8,695,508**

RESULTS:

- Laboratory tested with 10x better performance in the vertical and lateral fatigue testing
- High elongation – three times higher than our competition
- Less brittle and more malleable
- Excellent wear resistance
- Easy and safe pop-in installation
- Eliminated pedestal roof wear, drastically reducing costly repairs
- 300 lbs. pull-off test, will not disengage during side frame transit

Pennsy Corporation

515 S. Franklin Street
West Chester, PA 19382
(610) 692-8618 Phone
(610) 692-6478 Fax



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Material Properties

	Competitor*			Pennsy Standard	
	Metric	English		Metric	English
Hardness, Rockwell B	95	95		70	70
Tensile Strength, Ultimate	724 MPa	105000 psi		450 MPa	65300 psi
Tensile Strength, Yield	400 MPa	58000 psi		345 MPa	50000 psi
Elongation at Break	12 %	12 %		33.00%	33.00%
Modulus of Elasticity	200 GPa	29000 ksi		200 GPa	29000 ksi
Poisson's Ratio	0.29	0.29		0.27	0.27
Shear Modulus	80 GPa	11600 ksi		80.0 GPa	11600 ksi

Pennsy's Pedestal Roof Liner Laboratory Test Results

At the Pennsy test center we built a test machine and fixture to simulate the interface and forces subjected to a Pedestal Roof Liner. The vertical testing consists of cycling a vertical force of 20,000 lbs @ 1hz through a side frame fixture onto a bearing adapter. This test ran until failure. The lateral testing consist of 15,000 lbs constant vertical load, with ¼" lateral displacement, fully reversed @ 0.5 hertz for 100,000 cycles.

The results showed the Pennsy part has a greater than 10x better performance when compared to the standard clip-on liners. In vertical testing the competitor's clip-on liner, made with spring steel, failed in under 108,000 cycles. The heavier Dyna-Clip failed in under 80,000 cycles. The Pennsy part went greater than 1,000,000 cycles without failure!

Lateral testing shows no measurable wear on either the Pennsy or competitor's clip-on roof liner. However, multiple cracks were observed on the competitor's clip-on roof liner. The standard liner also caused 1/32" of wear to the bearing adapter. The Pennsy liner did not crack and caused NO measurable wear to the adapter.

Pennsy's pedestal roof liner is a superior performing part at a low cost. It will outperform all pedestal roof liners currently available. Pennsy's pedestal roof liner has elongation that is three times that of its peers with a lower hardness to improve survivability. Failures of our pedestal roof liner will occur as intended, due to wear of the liner, not because of forced FRA mandated replacements owing to cracking and breaking.

Call Pennsy and ask to see the complete test results.

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FACT SHEET

Adjustable Handle Wheel Chock

PROBLEM:

Ergonomically adverse wood chocks are trip hazards with a short product life.

Wheel chocks are an important safety item in any rail yard or repair facility. Wooden wheel chocks crush and splinter – thousands are thrown away each year. Chains, bolts and other foreign objects placed under wheels don't always keep the cars or wheel sets from rolling. Also, these ad hock arrangements typically require workers to crawl under cars to set and remove the objects, risking injury or even worse.

SOLUTION:

Pennsy's Adjustable Wheel Chock

The adjustable wheel chock is bright yellow with a reflective handle. This chock greatly improves visibility even in a dark shop. The adjustable handle is designed to reduce workers from bending when it is applied while simultaneously limiting potential tripping hazards.

The Pennsy Adjustable Handle Wheel Chock is made from an advanced polymer material developed to resist crushing and to provide a long product life. The adjustable handle offers flexibility to avoid interferences with rail car equipment and to avoid tripping hazards. The chock is also a permanent, bright yellow with a reflective band on the handle to ensure high visibility.



Pennsy Part# PN2434
Adjustable Handle

RESULTS:

- Crush-resistant Polymer
- Custom Ergonomic Design
- Increased Worker Safety and Productivity
- Permanent, High Visibility Safety Yellow
- Reflective band, for Increased Visibility and Safety
- Provides Positive Railcar Securement
- Removal of potential trip hazards

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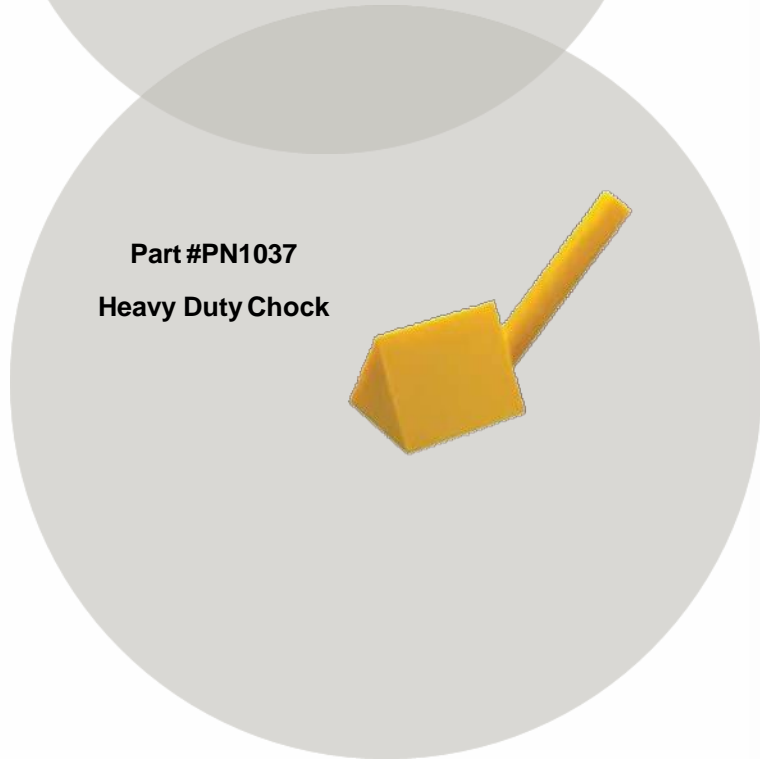
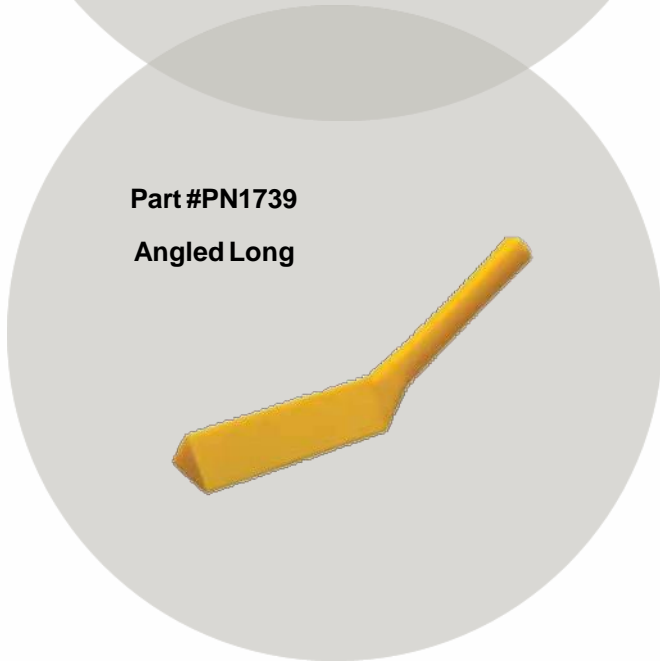
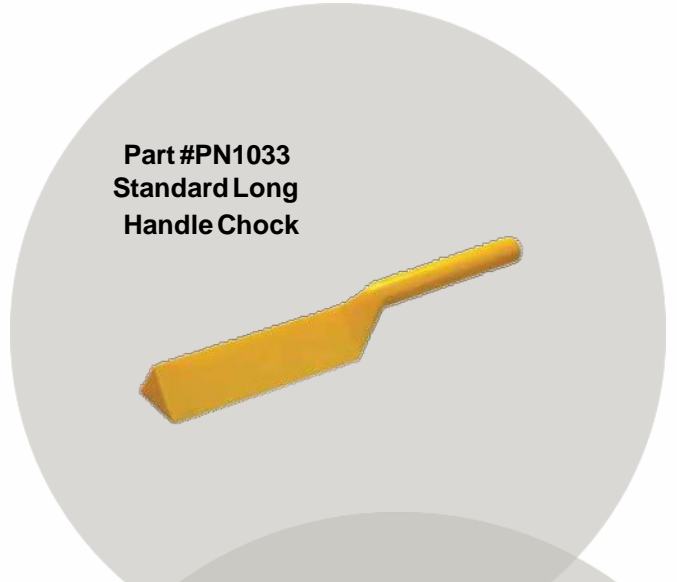
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Penny Wheel Chocks



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FACT SHEET

Lightweight Rerailer

PROBLEM:

Current rerailers are heavier than OSHA's & NIOSH's 2 person lifting limit, making them difficult to carry and maneuver.

Rerailers need to be carried to derail locations. Current rerailers weigh 124 to 180 lbs, while OSHA & NIOSH have set the safe lifting limit at 50 lbs per person. This means they require 3 to 4 people to lift safely.

SOLUTION:

Pennsy's Less than 100lbs Rerailers

Pennsy designed a light weight Inside & Outside rerailer set. Weighing less than 100lbs each, these rerailers safely fall under OSHA's & NIOSH's 2 person lift criteria.

Their classic ramp design lifts the wheels and guides them back onto the track. Held in place by a clamp and saw tooth locking mechanism, the rerailers will not kick out during a derail.

Being an all cast metal design, the rerailers are durable and will survive multiple rerails.

Prevent injuries from carrying a rerailer that is too heavy and outside the OSHA & NIOSH 2 person lift limit with Pennsy's light weight



Outside Rerailer 90 to 155lbs rail – **Part# PN2594**

Inside Rerailer 90 to 155lbs rail – **Part# PN2592**

Clamp – **Part# PN2597**

Wedge – **Part# PN2599**

Patent# 8,590,457

*Rerailers used in pairs, 1 clamp & 1 wedge needed for each rerailer.

RESULTS:

- Light Weight, less than 100 lbs!
- Proven ramp design guides wheels easily onto track.
- Clamp and saw tooth wedge locking design keeps rerailers from kicking out.
- Strong enough to rerail a 6 axle locomotive.
- Durable cast metal design will last years.

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(610) 692-6478 Fax



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Outside Rerailer 90 to 155lbs rail
Part# PN2594 – less than 98lbs



Inside Rerailer 90 to 155lbs rail
Part# PN2592 – less than 98lbs



Clamp – **Part# PN2597**



Wedge – **Part# PN2599**

Watch the Pennsy rerailers in action at

<http://www.youtube.com/watch?v=eHmIHjj4Uis>

Key words “Pennsy rerailer”

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FACT SHEET



Locomotive Rerailer Carrier

PROBLEM:

- Storage of the Pennsy Light Weight Rerailer on the locomotive of the train.
- Finding an appropriate storage location off the locomotive deck so that the Rerailer is not a trip hazard

SOLUTION:

Pennsy's Locomotive Rerailer Carrier

Pennsy designed a light weight carrier that can hold the entire Pennsy Light Weight Rerailer set.

Attaches securely to an unused coupler of the locomotive in the closed position

Frame of carrier weighs less than 30 lbs



Locomotive Rerailer Carrier – **Part# PN2670**

Additional Parts Shown:

- Outside Rerailer 90 to 155lbs rail - **Part# PN2594**
- Inside Rerailer 90 to 155lbs rail – **Part# PN2592**

RESULTS:

- Securely fixed to locomotive by the coupler knuckle
- Offers a convenient storage location for the Pennsy Rerailer that can easily be accessed by two operators and that is out of the way during normal operating conditions.
- Holds all components of the rerailer, including saw tooth wedges and clamps
- Durable steel tubing construction that will last years.

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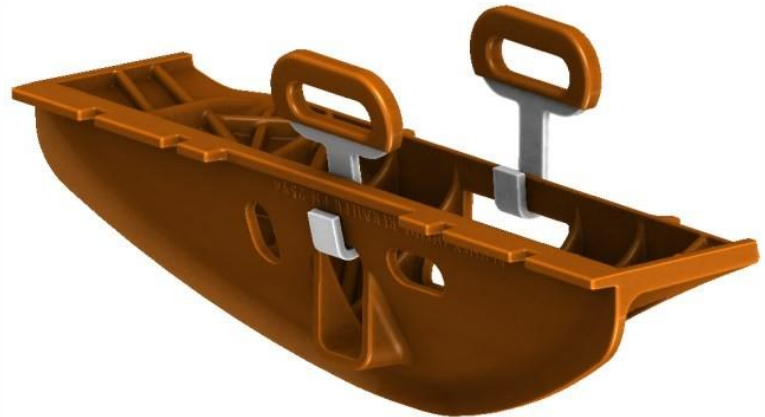
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Hook and Rope Carriers

Single Hook Rerailer Carrier

Pennsy Part# PN2674

- Carrier allows for easy mobility of a Rerailer by providing carrying handles.
- Hooks can engage to multiple interfaces of the Rerailer to better suit the users preference.
- When two people use these hooks to carry a Rerailer they are abiding by OSHA's 50 lbs carry per person limit.

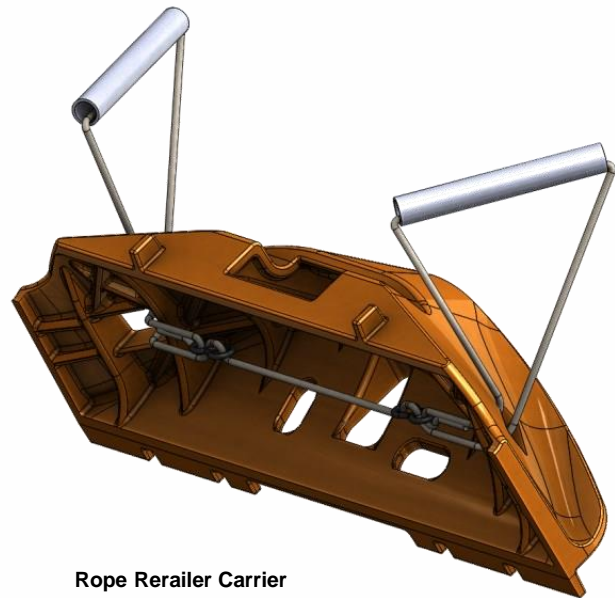


Single Hook Rerailer Carrier
PN2674

Rope Rerailer Carrier

Pennsy Part# PN2672

- Rope-style alternative method of carrying the rerailers.
- Adjustable length carrier allows for a comfortable carrying height of the Rerailer.
- The Rope Rerailer Carrier also fits within OSHA's 50 lbs carry per person limit.



Rope Rerailer Carrier
PN2672

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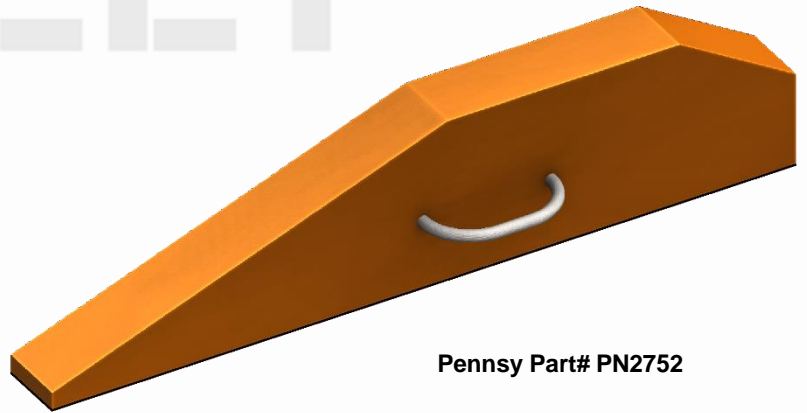


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FACT SHEET

Polymer Rerailer



Pennsy Part# PN2752

PROBLEM:

The incident of an inside-wheel-only derailment can occur due to poor track conditions. A standard rerailer set or wood blocking is typically used to rerail the wheels. However, a rerailer set can be difficult to install and wood blocking is unreliable and can fail.

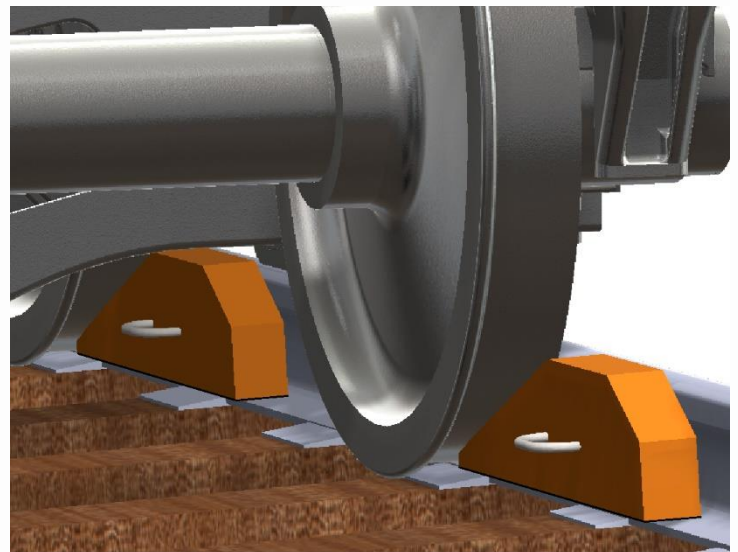
SOLUTION:

Pennsy's Polymer Rerailer

The Polymer Rerailer replaces the need for wood blocking or a standard rerailer set, as a reliable and easy to use solution. Simply wedge a Polymer Rerailer under each derailed wheel and it's ready to go!

RESULTS:

- Easy to use: set, wedge, and rerail
- Long-lasting high strength polymer material
- High visibility orange
- Only 20 lbs.
- Easy carry rope handle



Please refer to recommended installation instructions for setup.

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FACT SHEET

TOFC Hitch Barrier



Pennsy Part #PN1959

PROBLEM:

Intermodal rail cars equipped with collapsible hitches have metal covers which are frequently damaged by trailer and chassis landing gears. Repairs to covers are costly and time consuming

SOLUTION:

Pennsy's TOFC Hitch Barrier

Pennsy designed a polymer hitch barrier to warn of the danger of a collapsible hitch.

Barrier will return to original shape after contact with trailer or container.

RESULTS:

- Elimination of hitch covers
- Flexible polymer hitch barrier is not damaged by loading personnel
- Reduced rail car dwell time at intermodal facility
- Easy weld washer installation, no drilling or special tools
- High visibility orange, that will not rust or corrode

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FACT SHEET

Jack Pad

PROBLEM:

Friction pad must be used when jacking cars

Pad must be placed between Car Jacks or Jack Stands and metal frame of railcar.

Currently, carmen typically use plywood or other material available which does not hold up well.

Plywood cracks and splinters after repeated use, creating safety concerns.

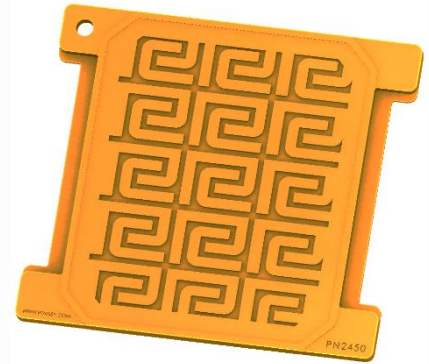
SOLUTION:

Pennsy's Jack Pad

Safety orange color makes it easy to identify and difficult to lose.

Pennsy's pad is constructed of a high tech and resilient polymer.

The part has a hole so that it can be tied to the Car Jack or Jack Stand.



Pennsy Part# PN2450



RESULTS:

- Due to material properties, the Pennsy Jack Pad will not crack and splinter like wood, and will withstand repeated jacking.
- Pennsy's pad will not become brittle in the cold, and will maintain its shape after repeated use.
- Grooves in the part create a non-slip surface to prevent the car from slipping off the jack.



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FACT SHEET

Lumber Corner Protector

PROBLEM:

Metal Protectors Pose a Worker Safety Threat

Currently, metal protectors are used at the top corner of a lumber stack to prevent tie-down cables from damaging the lumber. During loading and unloading of lumber, falling steel protectors can cause injury to ground workers. Cables can be frayed by metal protectors and can cause lumber packaging abrasion.

SOLUTION:

Pennsy's Lumber Corner Protector

The polymer design of the Pennsy Lumber Corner Protector eliminates potential worker injury should the protector fall from its position while the polymer material prevents cables from fraying. The unique angle feature of our Offset Lumber Corner Protector preserves the lumber packaging. Cables are kept away from the packaging with the 1-1/8" offset.



Pennsy Part# PN1466
U.S. Patent# 5,878,548

RESULTS:

- Enhances worker safety
- Extends cable life
- Unique cable retention feature facilitates quick application
- Cold temperature tolerant
- Flexible polymer material rebounds from crushing

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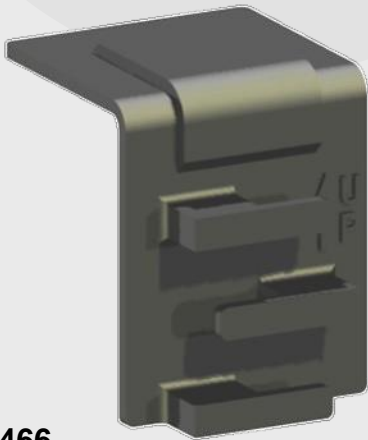


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Easy Two-Step

1. Place cable between top two fingers, then rotate cable under fingers
2. Holding cable about 6" from bottom of protector, flex cable under center finger and around bottom finger



PN1466
Lumber Corner Protector

