THE PAN AM CLIPPER

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VOL. 15 APRIL/MAY/JUNE 2006 ISSUE 10

PRESIDENT'S MESSAGE

This quarter our Chief of Police, John Holland, will describe some of the functions performed by a Railroad Police department today.

Chief Holland attended Cambridge College and Northeastern University, where he received a Bachelor of Science degree in Criminal Justice. Prior to joining the railroad, John was employed by the Tufts University Police. In his tenure with the railroad, he has held various positions with the RRPD, working his way up from the ranks to his current status as Chief of Police.

Thomas F. Steiniger
President

Railroad policing in the United States can lay claim to quite a colorful past. Its roots stem from the early 1800's when railroad "Special Agents" were doing battle with gangs of thieves and murderers known as the Hole in the Wall Gang, the Wild Bunch, and the James Gang, whose members included such notorious criminals as Robert Leroy Parker (Butch Cassidy) and Harry Longbaugh (The Sundance Kid), as well as Jesse and Frank James. Two of the most famous Special Agents hired to protect the railroads during these wild times were Bat Masterson and Allen Pinkerton. All that was required to become a Special Agent in those early days was the ability to fight and shoot a gun. That was then.

Nowadays, the scope of railroad policing is much more sophisticated in nature. The members of the Boston and Maine Railroad Police Department (RRPD) are a group of highly skilled, well trained officers working in a unique, specialized branch of policing. All officers are police academy graduates and receive updated training and instruction on a regular basis.

Some of the wide range of duties that Railroad Police officers are charged with include, but are not limited to, the protection of railroad employees and assets. They participate in the enforcement of local, state, and federal laws; and, when necessary, arrest offenders.

One of the most common offenses a Railroad Police officer encounters is trespassing - whether on foot, or riding in an All Terrain Vehicle, dirt bike, or snowmobile. The use of these vehicles on railroad property is not only illegal and unsafe, but can also damage the area supporting the tracks, which, in turn, could compromise the safety of passing trains, thus forcing railroads to spend vast sums of money on repairs. In an effort to curb this potentially destructive activity, RRPD officers meet with various recreational vehicle groups to inform the members about the hazards of trespassing and any associated penalties. Officers also give presentations through the Operation Lifesaver program to aid public and private schools in educating students at an early age about the dangers and penalties of trespassing.

All of us are familiar with news stories that have all too graphically spotlighted the consequences of what happens when a motor vehicle operator ignores grade crossing warning devices and proceeds to cross the tracks in front of an oncoming train. In an effort to curtail this illegal and dangerous practice before it results in tragedy, the RRPD officers habitually stop these vehicles and issue citations which carry fines of between two hundred and five hundred dollars. Most often this sort of deterrent will make a lasting impression and help save a life.

One of the certainties of our industry is that no railroad is safe from vandalism. Here at Pan Am Railways, the RRPD apprehends the perpetrators of such crimes as spray painting (tagging) rail cars or vandalizing buildings, switches, or signals. Any one found guilty of these serious crimes can expect to be prosecuted to the full extent of the law and penalized harshly by the court system. Just as on every railroad, here at Pan Am Railways, a very fundamental aspect of railroad policing involves protecting the customers' cargo as it travels over the rail system. It is an expectation that, plainly, must be met. To that end, during their tour of duty, our officers inspect high value freight at interchange points and in freight yards in an effort to insure that we meet that responsibility to our valued customers.

The nature of all policing strategies understandably changed dramatically following the events of September 11, 2001. A zero tolerance policy governing trespassing was instituted by the RRPD, along with increased patrols of railroad bridges, tunnels and any vulnerable property. In addition, part of an officer's patrol duty now includes watching for signs of domestic terrorism. To assist in this vital task, the RRPD receives a continuous flow of information from the FBI, Homeland Security, and various state run anti-terrorism entities. RRPD officers attend regular meetings with these groups to share information and receive terrorism updates. The nation's railroads are fortunate to have a Norfolk Southern Police Lieutenant assigned full time as the Railroad Police Liaison to the FBI National Joint Terrorism Task Force in Washington, DC. This affords the RRPD and all railroad police agencies the ability to obtain and share information on terrorism in a timely manner.

Railroad policing has, indeed, come a long way in two hundred years. It is conceivable that just about any crime which is committed in a city or town can take place on railroad property. This is one reason that RRPD officers rely heavily on assistance from local police departments, railroad employees, and citizens, especially those who reside near railroad property. It is not uncommon for officers to give their cell phone and pager numbers to train crews and some neighborhood watch groups. Calls from these contacts have helped the RRPD prevent or solve a number of crimes over the years. As always, we remind all members of the public that they are the "eyes and ears" of the RRPD. If you should witness acts of vandalism or any suspicious activity, please notify us at 800-955-9217, or call Railroad Operations at 800-955-9208.

John P. Holland
Chief of Police

CHANGING OF THE GUARD

March 31, 2006 marked the end of an era in the Information Services Department as, after eighteen years of dedicated service, Ed Felten retired from Pan Am Railways. Ed provided valuable technical support throughout the years to so many of us, always doing so pleasantly and skillfully; needless to say, we are grateful for his commitment. Besides possessing a vast knowledge of computer programming, Ed is an avid amateur railroader and photographer. Lots of back issues of our company magazine have featured his wonderful photographs – a legacy to be appreciated for years to come.

Ed's special day was commemorated with a luncheon attended by a host of his Pan Am Railways friends. He received many fine gifts, including an engraved pocket watch given by his Information Technology (IT) family. We wish Ed and his wife many healthy and happy years together. He will be missed, and we hope he will keep in touch.

So, how do you follow up a class act like Ed? It took a fair share of hard work and research, but we found the right successor. The new "Mr. IT" at Pan Am Railways is Gene Beers, a true IT professional with 35 years of experience. Gene brings with him a solid background in Business and Systems Analysis, Programming, and Database Management. Over the course of his professional career, he has worked with or for companies such as Joan Fabrics, Kronos, Nashua Corporation, Holmes Transportation, Cardinal Distribution, and Arrow Automotive. It is apparent that the future of the Information Services Department at Pan Am Railways continues in good hands.

Contributed by:
Ronald E. Jolin
Information Services Department

Ed Felten
Photo by Wayne Bailey

Information

Pan Am Clipper is published four times a year by Pan Am Railways.
Editor
Kathleen Gregory
Iron Horse Park
N. Billerica, MA 01862
(978) 663-1130

Address Change?

Let us know your new and your old address.
Fax it to 978-663-6907 or send it to the Editor, Pan Am Clipper.

If you have a story idea, fax it to us on a single sheet of paper at (978) 663-6907 or send it via MEMO to the Editor.

Pan Am Railways on the Internet

The Pan Am Railways web site (www.panamrailways.com) is alive and well, offering car location information either through the car movement system (STARR) or the AEI database. CustomerService@panamrailways.com is now another option for customers to access car location information, etc.
Printed by
George H. Dean Company
Graphic Design
Jennifer Neveu Graphic Design

SAFETY HAS ITS REWARDS

On May 16, 2006, a group of Pan Am Railways dignitaries, headed up by Thomas F. Steiniger, President, traveled to Washington, DC to accept a prestigious E. H. Harriman Award Silver Medal for the year 2005. In winning the award, Pan Am achieved an injury ratio of 1.33 injuries per 200,000 man-hours worked. This ratio, in fact, placed Pan Am as the third safest railroad in the nation, second in its class. Harrimans are awarded in the spring to acknowledge the previous year's excellence, and this latest award complements our recent Harrimans in 1994, 1995, 1997, 1999, 2001, 2002, 2004 and 2005. We take pride in having one of the safest railroads in the nation and will continue to demonstrate an underlying commitment to the safety of our employees

Winning a Harriman is a significant accomplishment because it commends all of our employees who work in all kinds of weather, day and night, seven days a week. A complete and total dedication by every manager and every employee on the property is what makes a safe work place. Congratulations to our labor force for working safely and going home at the end of the day in the same condition they arrived in. As always, we must continue to strive for zero injuries and do better in the future.

The annual rail employee safety awards were founded in 1913 by the late Mrs. Mary W. Harriman in memory of her husband, Edward H. Harriman, a pioneer in American railroading. For many years, the program was sponsored by two sons, E. Roland Harriman and the Honorable W. Averell Harriman, both now deceased. The awards are currently administered under the auspices of the E. H. Harriman Memorial Awards Institute, with support from the Mary W. Harriman Foundation.

At the time the Harriman Awards were founded, railroading was considered among the nation's most dangerous occupations. However, employee injury rates have declined sharply, with almost an 80 percent decline just since 1980 - and today railroad employees have injury rates comparable to employees in retail stores and lower than those in other modes of transportation.

Winners are chosen by a committee of individuals in the transportation field. Awards are granted to railroads on the basis of the lowest casualty rates per 200,000 employee-hours worked - a formula that takes into account the volume of work performed, as well as the number of fatalities, injuries and occupational illnesses confirmed by the Federal Railroad Administration.

Another award given by the E.H. Harriman Memorial Awards Institute recognizes one railroad employee in the nation for outstanding safety achievement; namely the Harold F. Hammond Award. The winner of the Hammond Award is clearly a proactive safety thinker with the motivation to prevent pain and suffering for his or her friends and co-workers through taking action on safety issues. This year's recipient is Robert P. Coronado, maintenance of way safety assistant with BNSF Railway Company in San Bernardino, California.

A 34-year rail veteran with the Brotherhood of Maintenance of Way Employees Division, Robert spends his days in the field watching out for crews repairing tracks. He was nominated by BNSF Chairman, President and CEO, Matthew K. Rose, who described Robert as a "leader, crusader, and motivator in developing a safety frame of mind and culture." Mr. Coronado has spent endless hours developing safety training videos and training crews. He also developed the Safety Assistance Beam to protect Roadway Workers near live tracks. This infrared beam provides a safety curtain along the track that will sound an alarm if a person steps through it, effectively keeping people from fouling an adjacent track in the course of working on their track.

Here at Pan Am Railways, we are always in search of people who, like Robert Coronado, show a desire and motivation to help and protect others. If you have ideas, special training, a passion for safety and want to make a difference, let us know. There may be a Harold F. Hammond Award in your future!

The Harold F. Hammond Award, established in 1986, is awarded to an individual railroad employee for outstanding safety achievements. The award is named for Harold F. Hammond, former president of the Transportation Association of America, who served for many years as chairman of the selection committee.

Contributed by:
Skip Pratt, CIH
Safety Department

E.H. HARRIMAN AND HAROLD F. HAMMOND

MEMORIAL SAFETY AWARDS

WASHINGTON COURT HOTEL
WASHINGTON, D.C.

MAY 16, 2006

Calendar Call.....It Is Time for 2007 Calendar Photos

It is once again that time of year when we ask all photographers out there to start thinking ahead. This is our annual appeal to our current loyal photographers – and new ones, too – to get those slides in for next year's edition.

Hopefully, everyone has been out there clicking away, building up a good collection from which to choose. Remember, four seasons and new locations are, ideally, what we are looking for.

Our calendar is something to be truly proud of, and we are ever grateful for your participation in the process. Slides will be accepted **up until September 29th.**

LOOOKING UP BRIDGE FABRICATION AT PERMA TREAT

When considering the array of railroad products produced at Perma Treat, an often overlooked aspect is the bridge timber and specialty tie division. With over six hundred bridges to maintain on Pam Am's rail system alone, not to mention five other New England railroads that Perma Treat supplies timbers and specialty products to, the bridge mill stays busy week after week manufacturing products that range in size from as small as 4" x 6" x 12" to upwards of 12" x 16" x 20', some weighing over 2,000 lbs.

Manager Willis Collins points out that, over the past twenty years, more than five hundred bridges requiring from 15 to 1,500 pieces each, have passed by his Dewalt radial arm dapping saws. Willis also adds that most people driving under or passing by a railroad bridge probably have no idea how intricate the timber between the steel structured base and the actual rail can be. While many bridge timbers are the same height on both ends, there are cases where elevated timbers are required. "A good comparison would be an average highway. The same elevations found on turns and curves approaching and crossing water similarly exist when a rail bed does." To achieve that difference in height, a block must be fabricated and attached to one end of the timber in order that, for example, it remains at 9 or 10 inches while the other end can be as high as 15 or 16 inches. In other instances the same result can be realized by removing or dapping out a tapered section of wood, allowing a timber to remain randomly 9" x 14" on one end and reduced to possibly 9" x 9" on the other.

If this seems like a great deal of work for one timber, there are still girder slots and rivet runs to be dapped out, and hook bolt holes to be drilled. Hook bolts, which are used to fasten the cantilever timbers to the super structures supporting the bridge, allow walkway timbers to be secured so that railroad personnel, such as bridge inspectors, can access the bridge. To put it simply, a lot work goes into a bridge before the actual timbers ever reach the installation site.

Willis noted that throughout his years of fabricating these high tech timbers, one of the things he has found most satisfying, yet challenging, is working with the various railroad engineering departments in an effort to find ways to reduce cost, improve a timber, and, on many occasions, shorten the timeframe required to produce the bridge. It is not uncommon for an idea spawned at one of these meetings to later become accepted practice.

A week after making a super elevated bridge for use on the Pan Am rail system, Perma Treat could find itself fabricating 6" x 8" x 29" block ties for use in Grand Central Station where a full length cross tie cannot fit in the station tunnel, or possibly making posts and rails for a wooden guard rail system at a regional airport. The fact that each day may bring with it a completely new project from the last is what keeps the work exciting and interesting.

When asked what he is most proud of in his tenure managing the bridge mill, Willis responded there are two accomplishments that stand out. The first being that, with over five hundred bridges out the door and hundreds of independent inspections, not a single bridge has ever been rejected or deemed unacceptable for being out of specification. The second, that the bridge mill facility stands with an unblemished safety record in 20-plus years of operation, with not a single reported injury or incident. As safety will continue to be the number one priority at Perma Treat, this is an achievement we are extremely proud of.

We hope that we were able to provide a little insight into this often overlooked facet of railroading. From freight lines to passenger trains, so few people that ride them or even see them have any idea what it takes to keep the trains rolling on the track. So if you happen to live in or visit the New England area and catch sight of a railroad bridge, keep in mind that there is a pretty good chance it started out at Perma Treat's Connecticut facility.

Contributed by:
Perma Treat

Measuring Timber for Dapping
Photo by Phil Corder

Dapped Bridge Timbers
Photo by Phil Corder

New Bridge at Bellamy River
Photo by Phil Corder

TOPPING OUT

In the previous issue of The Pan Am Clipper, a general overview of NorthPoint was provided, along with pictures of the first two condominium buildings, Sierra and Tango. Since this project is ongoing, periodic updates on this massive undertaking will be written about in order to keep everyone informed of its progress.

On May 22, 2006, a significant milestone in the construction of the 99-unit Sierra, expected to be completed in April 2007, was commemorated with a "topping out" ceremony. As the last steel beam wrapped in the stars and stripes of our American flag and adorned with an evergreen was secured in place, work came to a halt and a celebration ensued where all the workers enjoyed refreshments as they reflected back on this exciting achievement.

There is a long and rich history to the "topping out" or "topping off" ceremony, and many theories abound as to how and why it has become the tradition that it is today. Its roots may go as far back as 2700 B.C. to ancient Egypt. Legend has it that when Egypt's first stone building was finished, a live plant was placed on the building to honor those who had died during its construction.

Photo by Phyllis Bretholtz

In Scandinavia, Vikings revered the evergreen. Their mythology suggests that man originated from trees and that his soul would return to the trees after his death. Following a successful raid, the evergreen, placed atop a recently constructed mead hall, signaled a celebration in progress.

In Italy, during the early Renaissance period, an evergreen signified the completion of the gothic cathedrals and the week-long celebration that would follow.

According to Native American beliefs, as trees were cut to build shelters, the top of the tree would be placed on the roof of the new structure to ensure that the spirits in those trees would not be rendered homeless. This gesture was intended to convince the tree spirit of the appreciation of those who had built the home. This custom was carried into modern times by the Native Americans who helped build our skyscrapers, and it is the ironworkers of today who carry it on and deem it their own.

It is safe to say that regardless of its origin, the "topping out" ceremony is representative of a significant achievement, and certainly warranted the celebration that occurred in any culture throughout history.

This is our first "topping out" ceremony at NorthPoint; and that alone makes it a tremendous milestone. There will be many others to follow as the vision of this neighborhood becomes a reality. To learn more about NorthPoint please visit our websites: www.northpointcambridge.com or www.livingatnorthpoint.com, or come by the sales center at 24 East Street in Cambridge, Massachusetts.

Contributed by:
Philip D. Kingman

Photo by Phyllis Bretholtz

Photo by Phyllis Bretholtz

TEAM "PJ" PULLS OFF A WIN

While driving to work on Tuesday, May 16th, Mary Lou Maguire (Human Resources Department) happened to hear a public service announcement on the radio that Lowell General Hospital's(LGH) annual Team Walk for Cancer Care was taking place on Sunday, May 21st. This triggered memories in May Lou's mind of Paula Coakley, who passed away in April and had undergone treatments at LGH. When Paula's husband, Arthur, came in for a visit the same day, Mary Lou felt that Paula was sending her a sign from heaven to dust off her sneakers. And so it began. She called upstairs to Kathy Gregory (Executive Department) and they both just knew they had to walk in Paula's memory. Kathy went by LGH on Thursday, the first day of live registration, and got their numbers. It was now official! The team of two felt a couple of days would not be much time to raise money, but word spread quickly. Donations to sponsor Team "PJ" (Paula Jean Coakley) poured in. Overwhelmingly, Pan Am employees pulled together and donated more than $900.00 to the Lowell General's Hospital Team Walk for Cancer Care in Paula's memory. In Mary Lou's words, "it was an awesome effort". In total, almost 4,000 people walked that beautiful Sunday morning and raised upwards of $461,000.

Paula would be happy knowing that through her memory she is helping others, and she certainly would have been touched by the generosity of her co-workers, not to mention
proud of Kathy and Mary Lou for taking on the six-mile challenge!

Personnel Department News

Springfield Terminal Railway Company would like to wish Michael Sulham (37 years of service), Robert Gillam (19 years of service), Elton Lavigne (21 years of service), Ed Felten (19 years of service), and George Clem (36 years of service), a happy retirement. We would also like to congratulate Gerald Ricard, Jr. on his new daughter Isabella, and Roy Dennis on his new son Adam Dennis.

Contributed by:
Cynthia S. Scarano
Human Resources Department

SPECIAL DUTY

As a matter of routine, the Railroad Police Department (RRPD) often finds itself working closely with various local, state and federal law enforcement agencies. By and large, such valuable associations prove mutually beneficial to all parties.

One of the more interesting relationships, albeit on a less frequent basis, is that which exists between the RRPD and the United States Secret Service. Whenever the President of the United States is scheduled to visit a community within whose boundaries railroad tracks are located, it requires the synchronized efforts of many individuals to insure that his stopover is without incident.

Usually a Secret Service presidential advance team will involve the RRPD officers in meetings to coordinate strategies designed to protect the President. Officers may be assigned to such duties as riding in the presidential motorcade or being stationed at railroad crossings or bridges where the motorcade will pass. Acute attention is paid to even the most minor detail. Keeping in contact with railroad operations personnel to determine the whereabouts of any train in the area and making certain that railroad bridges along the motorcade's route are devoid of trespassers, are just two important functions of those RRPD officers entrusted with this special task.

Here at Pan Am Railways, on more than one occasion the RRPD has had the privilege of playing an integral role in the security of President George W. Bush during his visits to the Pan Am facility at the Pease International Tradeport. As a gesture of thanks to the RRPD for its many years of assistance, the Secret Service invited Chief John Holland to meet with President Bush following a recent speaking engagement in Manchester, New Hampshire. The President expressed gratitude to the RRPD for serving our country as law enforcement officers and implored us to be safe in carrying out our duties.

Contributed by:
Chief John P. Holland
Railroad Police Department

LET'S TALK ENERGY

With the summer driving season in full swing, bringing with it higher gasoline prices, we are constantly reminded of the escalating cost of petroleum in recent years. As worldwide demand increases and oil gets more expensive to extract from the ground, it is not unthinkable that the price of a barrel of oil will reach three digit levels in the near future. Here at Pan Am Railways we are making necessary adjustments to reduce energy consumption where we can by installing Auxiliary Power Units (APU) in our locomotive fleet. As you may have read in previous issues of this magazine, these APU's allow us to shut down our locomotives for a time without risking damage to the machinery. Just as significant is Pan Am Railways' participation in several moves of energy products that provide an alternative to imported petroleum.

The primary form of non-petroleum energy on Pan Am Railways (PAR) has always been coal. Coal is the single most important commodity to North American railroads, accounting for fifteen percent of the industry's freight revenues. On PAR we haul trainloads of coal to two power plants, one in Bow, New Hampshire and one in Mount Tom, Massachusetts. Bow's coal originates from both domestic sources in the Appalachian coal fields and overseas. The domestic coal moves via rail for the entire journey from mine to power plant, while the imported coal moves by ship to the Port of Providence (Rhode Island), thence by rail. We also handle a smaller move of coal from the Port of Portland (Maine) to a large paper mill at Rumford, Maine.

Although coal remains an integral part of our energy mix, other sources of energy are taking hold which Pan Am Railways will help facilitate to the New England area.

One such source is wind power. While associating a railroad with wind power might seem strange, PAR recently participated in a move of wind turbine power equipment from Pensacola, Florida to Presque Isle, Maine. Evergreen Windpower LLC is assembling the thirty-three General Electric wind turbines on the ridge of Mars Hill Mountain in Mars Hill, Maine. The project will generate nearly fifty megawatts of electricity when operating at full speed.

Another facility in northern Maine is already providing energy from a renewable source - one that would otherwise end up in a landfill. Pan Am's own Perma Treat Corporation several years ago began collecting and burning scrap crossties in its rebuilt boilers in Mattawamkeag, Maine. As new ties replace old in track projects around the region, they are shipped back to Maine where they are burned in steam boilers. The boilers are used to dry wood in four steam kilns at Perma Treat's sawmill. Steam that is not needed for the kilns is used to generate electricity that is fed back into the grid. By taking advantage of a material that would otherwise be thrown out, Perma Treat is practicing the old Yankee tradition of "waste not, want not".

While the aforementioned products have been a valuable source of freight traffic for several years, there are new developments taking place in the energy market that will greatly impact the New England economy in the coming years in the form of biodiesel and ethanol.

Biodiesel is a diesel fuel substitute derived by blending ten parts soybean oil and one part methanol - a process so simple that it is possible to make biodiesel on a kitchen stove. At full strength, the product is known as B-100, and it can be used in any application that diesel fuel can, without costly modifications to the equipment. In addition, biodiesel can be substituted for No. 2 home heating oil. As new clean air laws are enacted to reduce sulfur emissions over the next few years, it is expected that petroleum companies will choose to blend twenty percent biodiesel with No. 2 oil to create "B-20". We are presently working with several producers and distributors who seek to tap this potential market by taking advantage of low-cost rail service to bring either the raw materials or finished product from the soybean producing states of the Midwest.

Ethanol is a liquid fuel that is distilled from corn. U.S. production is centered in the Midwestern states of Illinois, Indiana, Iowa, Minnesota, Nebraska and Ohio. Presently ethanol acts primarily as an oxygenate in gasoline. Oxygenates help gasoline burn more completely, thereby reducing emissions. Since 1979, gasoline producers had relied on Methyl Tertiary Butyl Ether, commonly known as MTBE, to perform this function in gasoline; but due to changing regulations, MTBE is being quickly replaced with ethanol. Here

in New England, Connecticut already has a ban on MTBE, while Maine, New Hampshire, Vermont and Rhode Island will prohibit MTBE effective January 1, 2007. With access to petroleum terminals along the Atlantic Coast, Pan Am Railways is poised to participate in this developing market.

Since the earliest days of the rail industry, railroads have been tied to the transportation of energy products. As that market continues to evolve, the railroad will progress its efforts to serve this fundamental segment of its traffic base. The future offers more promise than ever before, and Pan Am Railways is poised to be part of it.

Contributed by:
Michael B. Clements
Marketing and Sales Department

Generator Hubs Departing Ayer, MA 5/31/06 in Train SEPO
Photos by Jonelle DeFelice

FREIGHT CAR CUSHIONING

All freight cars are equipped with some form of cushioning, whether it be the conventional draft gear or additional mechanical devices found either at the center of the car, or each end of the car. These devices have been engineered to absorb shock forces imposed on a car in a moving train or in switching modes.

Throughout the years, harnessing this energy has posed a challenge to mechanical and civil engineers whose purpose for doing so is to get the most out of:

a.) the equipment
b.) the product
c.) the track
d.) the service

Exactly which order of priority is given to each of these would probably depend upon one's personal railroad background.

Based on the above listed order, you might conclude this is a "Mechanical" department perspective - and you would be correct. However, when attempts to resolve a problem are contemplated, the final resolution should ultimately be beneficial to the railroad as a whole, thus reducing the cost of our operation in areas of switching, maintenance of equipment, track, and unnecessary dwell time of equipment. This holds true for designing freight car cushioning as well.

The fundamentals of the present conventional draft gear system do not differ greatly from the concepts which the Master Car Builder's Association standardized back in 1880. The draft gear, nested in the coupler yolk, was designed to be in compression regardless of the direction of force (pulling or pushing). Since that time numerous manufacturers have patented over 20,000 designs of mechanical devices in the hope of perfecting a better unit to harness this energy. Any such device installed in cars that will be interchanged from one carrier to another as well as locomotives in interchange service must meet the design criteria set forth by what is now AAR (Association of American Railroads) standards. The design must be compatible with all other cars in interchange.

In the 1950's, mechanical engineers and designers attempted to reduce even further the coupler forces associated with train handling. The Duryea patented design was the first of its kind. It applied hydraulics technology to absorb energy through a movable section of the freight car's underframe. This concept was modified soon after with the COC (center of car) sliding sill design. The COC incorporated a longer travel cushioning unit positioned in the center of the car in a sliding center sill. This sill actually slides within the housing of a stationary center sill. Most of these units had a twenty-inch travel within which the impact energy would be absorbed.

A fair number of cars equipped with these units are still in service today. In fact, Pan Am Railways has a total of 271 MEC and B&M boxcars equipped with either ACF Freight Saver or Keystone SA 20 inch travel models. Many of these units are the original units installed back in 1970 through 1979. The drawback to the COC configuration, however, is the additional weight of a second center sill which substantially reduces the load limit of the car. Once again, designers were called upon to answer industry needs. As you may be aware, when the light weight of a car increases, the load limit, which is the maximum allowable weight of the lading to be placed in or on a car, decreases. So with the emphasis that shippers place on reducing transportation costs, customers want to place as much of their product as possible in each car. Today there are still some six companies manufacturing over twenty-four COC units meeting AAR specifications. These units are supplied for replacement when conditions require change out.

In light of a profound concern on the part of shippers to reduce the tare weight, or "light weight", of a cushioned car, engineers and designers went back to the drawing board with thoughts on how to resolve this without adversely affecting the improved cushioning that the COC provided over the conventional draft gear. With cushioned cars, a customer's product was arriving at destination with less damage than ever before. This accomplishment was not to be compromised.

The culmination of several years of brainstorming resulted in the introduction of the end of car cushion unit, or EOC as it is commonly referred to. The EOC replaces the need for a coupler yoke and draft gear at each end of the car. Their newer design also eliminates the need for the hefty sliding center sill incorporated in the COC design. This resulted in considerable weight reduction of empty cars, yet provided equivalent, or even better, cushioning. Since 1974, EOC units have been the industry standard for new car construction.

EOC models used hydraulics to absorb impact and a spring cluster mechanism attached to the unit and the bottom cover plate to return or restore the unit to its neutral position. This return spring arrangement was the ultimate weakness in this design. Although EOC cushioning proved to be successful in comparison to its predecessor, the COC, the downtime caused by broken springs, which is an FRA Freight Car Safety Standard defect, was unacceptable. A defective unit renders a "bad order" status of a car. This downtime deprives customers from receiving their loads, shippers of empty cars, and additional handling and maintenance

costs to the railroads and car owners.

The challenge of reducing downtime due to defective return springs was remedied when engineers went back in time to review some of the more successful designs of earlier COC units. The ACF Freight-Saver 20B model, center of car unit, utilized nitrogen gas to center the sliding sill when the coupler load was eliminated. Today all AAR approved EOC units are pre-charged with nitrogen gas, thus eliminating the need of the high maintenance return spring mechanism.

Pan Am Railways' fleet of box cars includes 271 cars with 20-inch travel COC units, and 566 cars with 10-inch EOC units.

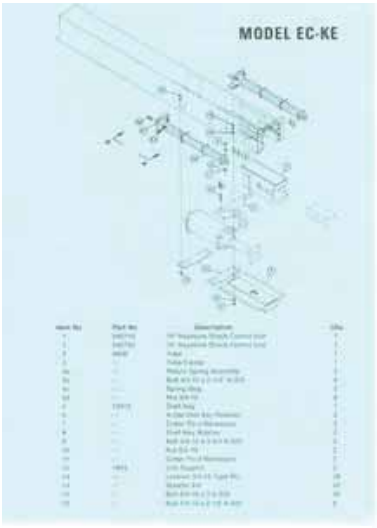
Over the years engineering has provided answers to many railroad industry challenges. As you can see, evolution of freight car cushioning is no different; it has been an ongoing endeavor to improve railroading.

Successful freight car cushioning does benefit:

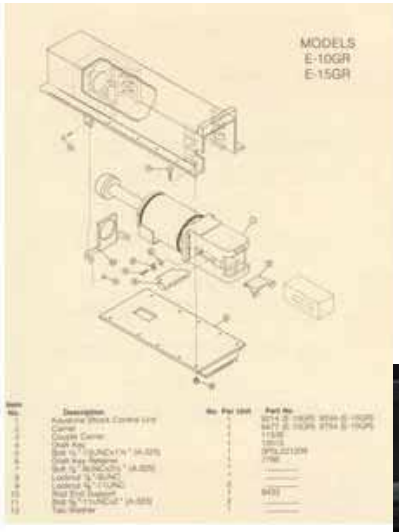
a.) the service.
b.) the track.
c.) the product.
d.) the equipment.

"Not necessarily in that order".

Contributed by:
Mechanical Department

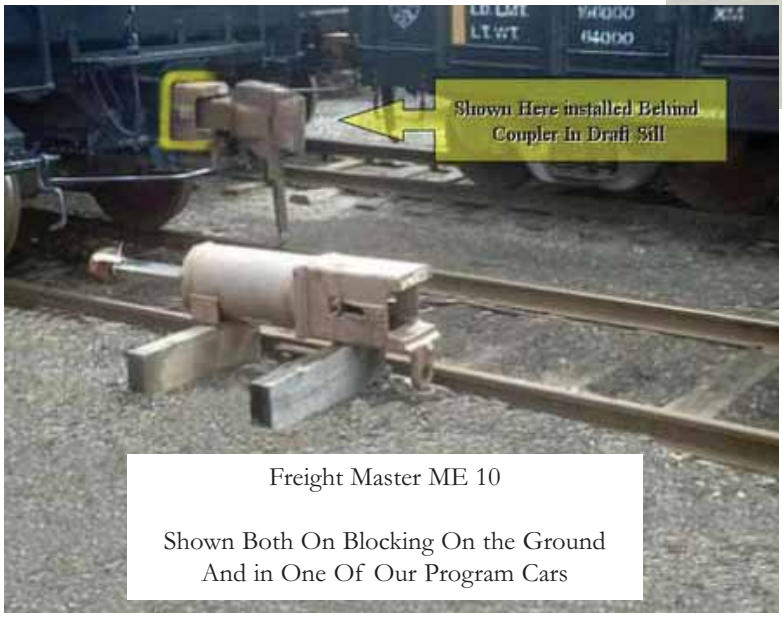


1st Generation EOC
Utilized Return Spring (Item 4A)
To Restore Unit After Buff



Gas Return Models Replaced
Earlier Spring Models

Typical COC Unit
Standard To Sliding Sill Cars



Freight Master ME 10

Shown Both On Blocking On the Ground
And in One Of Our Program Cars

FOLLOWING THE RULES

Although by the time you read this most school children are well into their summer vacations, Pan Am Railways employees find themselves involved in ongoing annual rules review classes. For each rules qualified employee, from engineers and conductors to foremen and dispatchers, it is probably time to attend a rules refresher course and be tested on rules proficiency.

Andrew Zompa, rules instructor for Pan Am Railways, began his career as a track laborer in 1994. In 1997 he became a Train Dispatcher, eventually qualifying on each of the four dispatching districts as well as the Chief Dispatching position; and in 2001, he accepted his current position as Director of Operating Rules. Andy travels the entire Pan Am Railways system several times per year - from Woodland, Maine on the Canadian border, to Rotterdam Junction, New York - as he coordinates and teaches all rules classes.

Pan Am is one of the ten full, and forty-four associate, members that make up the Northeast Operating Rules Advisory Committee, known as NORAC. Those Pan Am Railways employees who operate trains and track cars are governed by the NORAC book of operating regulations.

At the NORAC conferences, discussions center around current industry topics relative to safety and federal rulemaking, as well as voting on any internal rule changes. It is at the October meeting that NORAC outlines the coming year's classroom curriculum or any points of specific concern that may need to be covered in the classroom environment. This is also when Andy begins to formulate a curriculum for his Pan Am Railways employees to be taught and tested on throughout the coming year.

Sometimes, however, current "hot topics" may influence which matters warrant review and testing. For example, in 2005 an incident occurred in Graniteville, South Carolina, which brought to the forefront the need to focus on preventing and dealing with the aftermath of a calamity in today's world. A derailment occurred when a misaligned switch diverted the train from the main line onto a side spur, sending it into a parked locomotive. The derailment and consequent chlorine spill resulted in death, injury and costly cleanup.

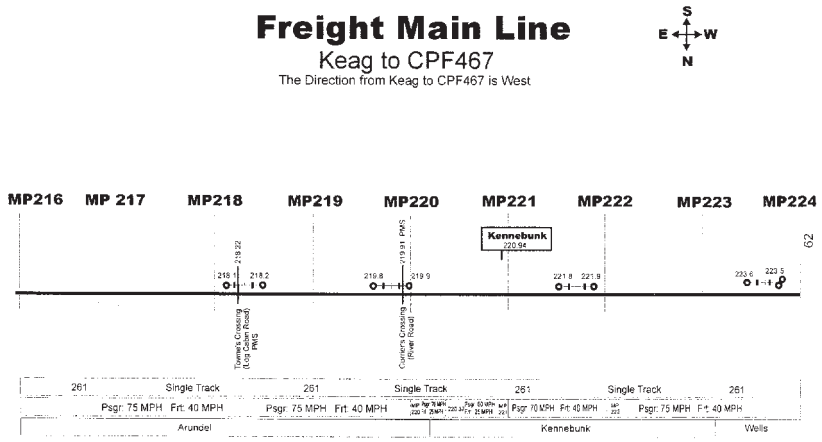
This incident prompted the FRA to examine the operation of switches on main line track where there is no signal system in place; and through Emergency Order Number 24, which outlines the requirements of training and mandates a new method of documenting switch operations, all of the nation's railroads were directed to reemphasize to all of their rules qualified employees the immensity of being absolutely clear on those rules governing the handling of switches in territory where there is no signal system.

This Emergency Order was distributed to all rules qualified employees here at Pan Am Railways. Mr. Zompa, assisted by Mr. David Nagy of our Safety Department, carried out the obligatory training on the new methods of switch operation, and Emergency Order 24 is now part of the annual rules qualification for all employees.

Keeping current with all federal regulations is a crucial facet of the job and sometimes impacts how or when testing is actually done. Between scheduled rules classes, Mr. Zompa administrates the Test and Observation Program (referred to as T&O's). This is a federally required program which is used to monitor employee compliance with the operating rules. All rules qualified employees are subject to testing under the program by an assigned supervisor in each department to ensure that compliance is maintained. If deficiencies are found, classroom training is modified to cover specific rules

Aside from all his training responsibilities, Mr. Zompa also maintains certain operations related publications. For example, the Pan Am Railways Timetable, which is a book of special instructions for employees that contains diagrams of the railroad from mile zero (0) at Mattawamkeag, Maine to Mile 467 in New York State; it also includes all the related branch lines.

The image shown here of a Pan Am Railways timetable page illustrates the location of track with a horizontal line through the



center of the page. Mileposts (MP) are represented by the vertical lines with the number above them, and are spaced equally to reflect the mileage from Mattawamkeag in a westerly direction. Every page represents between eight to ten miles of track, depending on how much data needs to be depicted for each mile. Stations are indicated by a name in a box, including the mileage. It should be noted that not all station locations are areas where the public can board a passenger train. Stations may be a group of signals, called an interlocking, or just a sign on a pole. Their locations are predetermined to allow the dispatchers to move trains to and from those locations. Signals controlling the movement of trains are shown next to the track, along with the corresponding mileage to the track position. Highway crossings and other physical characteristics affecting the movements of trains and track cars are denoted in the most accurate location so that crews of trains and track cars can expect to see all the features indicated at the same location along the tracks.

Bulletin orders are weekly publications that notify employees of changes to rules and procedures, or other instructions affecting the movements of trains. Division Notices are published as needed and contain information not affecting the movement of trains. Mr. Zompa is charged with maintaining all three of these publications for the Pan Am rail system.

Andy Zompa, Director of Operating Rules

It is further incumbent upon our Director of Operating Rules to preserve a close relationship with his counterparts on connecting railroads such as the MBCR, Amtrak, Canadian Pacific, and the CSX to ensure that any rules changes or modifications are carried by our employees operating over their lines, as well as their employees operating over the Pan Am lines. Andy is the key component in this ongoing process.

Each year beginning in January the process starts again. As stated at the outset, throughout the year all of Pan Am Railways' qualified employees are reintroduced to the rules.

Remember: Obedience to the rules is essential to safety.

Contributed by:
Andrew Zompa
Transportation Department

Teaching a Rules Class

Testing a Rules Class

THE GREAT FLOOD

The extreme weather conditions that hammered New England in the month of May 2006 produced what has been described as the worst flooding in the area since the 1930's. Heavy, lingering rains hit hard in cities and towns in Massachusetts, New Hampshire, and Southern Maine. The four-day storm yielded 12 to 15 inches of rainfall, causing many streams and rivers to overflow their banks. The widespread damage caused by these conditions led to President Bush's approval of a Federal Disaster Declaration for the areas affected the most on May 25th. As of June 26th, FEMA reports that nearly 25 million dollars in disaster aid, consisting of grants and low-interest loans, have been approved for residents in Massachusetts alone. An additional $12 million has been approved for affected New Hampshire residents, and $1.7 million has been approved for Maine.

The May floods affected the Railroad as well, raising challenges that required immediate action and resolution in order to minimize damage to property and avoid inconvenience to our customers and employees. The Railroad successfully repaired damaged culverts, avoided potential delays caused by abnormally high water levels, and designed a substitute retaining wall to replace one that was damaged and no longer functional. All of these efforts contributed to the successful maintenance of train service across much of the Pan Am Rail System, especially the Freight Main Line where NNEPRA passenger trains are in operation.

Below is an overview of the extraordinary conditions faced by our crews as they endeavored to put things right.

Peabody, Massachusetts – South Reading Branch

Peabody was one of the worst hit areas in New England, with the city seeing nearly four feet of water. Included in the damage was a double five-foot stone box culvert (#16.85), which failed due to the flooding. The damage caused by the failed culvert was minimized thanks to the work of Pan Am Railways employees. Through a partnering agreement with the City of Peabody and Eastman Gelatine Corporation, we were able to replace the failed culvert with five four-foot diameter steel corrugated pipes (pictured below).

Newmarket, New Hampshire – Freight Main Line

Many areas of New Hampshire experienced damage from the floods. In the town of Newmarket, Pan Am employees had to act fast in order to maintain a safe operation. The Lamprey River, which runs under a trestle at Milepost #252.01, had risen several feet to a dangerous level that threatened to stop the movement of trains on the Main Line. The stringer and pile trestle was made of steel and built in 2004 to replace a timber pile bridge that was previously at that locale. Because of its construction, we were able to safely walk trains across until the river receded. Engineering crews removed debris floating from upstream that was getting caught up in the bridge in order to ensure safe conditions to enable the continued movement of trains.

Trestle above normal water level

Trestle under water level after May rainstorms

North Berwick, Maine – Freight Main Line

As a result of the high water flows, floating debris from upstream created many problems for the Railroad. The debris plugged up the openings to culverts, thereby threatening to disrupt the movement of trains. Crews effectively worked to clear and repair the culverts in order to keep trains safely moving and minimize disruption to our customers. One such culvert (#73.32) in North Berwick failed due to the obstruction of several trees that became lodged in the culvert inlet, leading to the collapse of its first twenty feet. The failure of this four-foot double stone box culvert was especially problematic because of its location twenty feet below the top of the rail and because the banking to the edge of the ties had been washed away. Crews successfully cleared away debris, and then utilized rail and stone from the culvert to build a retaining wall. Track speed over this structure had been reduced to fifteen MPH for passenger trains and ten MPH for freights, but train service was never interrupted during the failure and consequent repairs, a fact attributable to the quick and effective work of the Pan Am crews. Plans for a more permanent repair of the structure include the dismantling of the failed twenty feet of stone box to make room for the installation of new steel corrugated pipes that will be matched in the original structure and backfilled.

Portland, Maine

Southern Maine saw widespread flooding as well, and The Railroad encountered problems at old Yard 5 in the downtown area of Portland. The property there is protected by a large retaining wall that is over four hundred feet long and thirty feet high. The heavy rains saturated the soil behind the wall, causing a failure of forty-two feet of one section, and placing other sections of the wall under scrutiny. The Engineering Department elected to build a new retaining wall in front of the old one utilizing steel cages, known as Gabion Systems, filled with eight-inch erosion stone. The Gabion wall will be one hundred and twenty-three feet long and fifteen feet high upon completion. We will have installed ninety-four Gabion cages and nine hundred and seventy-five ton of stone and fill on this project in order to ensure the continued safe flow of operations in old Yard 5.

All bridge structures in the areas affected by the floods throughout the May storms were inspected and watched over constantly for any sign of trouble that could create an unsafe condition.

Under tremendously adverse conditions and abnormal circumstances, it took the combined efforts of many Pan Am Railways employees to prevent major service interruption and keep the Railroad running. The May rainstorms proved to be a trying time for all areas affected by "The Great Flood", but we at Pan Am Railways took it upon ourselves to work as much as was necessary to take care of our employees, property, and customers.

Contributed by:
Michael Davis
John Thayer

Photographs by:
Michael Davis
Carey McDonald
Jeff Gerossie

PAN AM CLIPPER CONNECTION EXPANDS ITS NORTHEAST BUSINESS ROUTES

Featuring:

Metro-Convenient Airports
Schedule Frequency
Clipper Convenience Travel Program

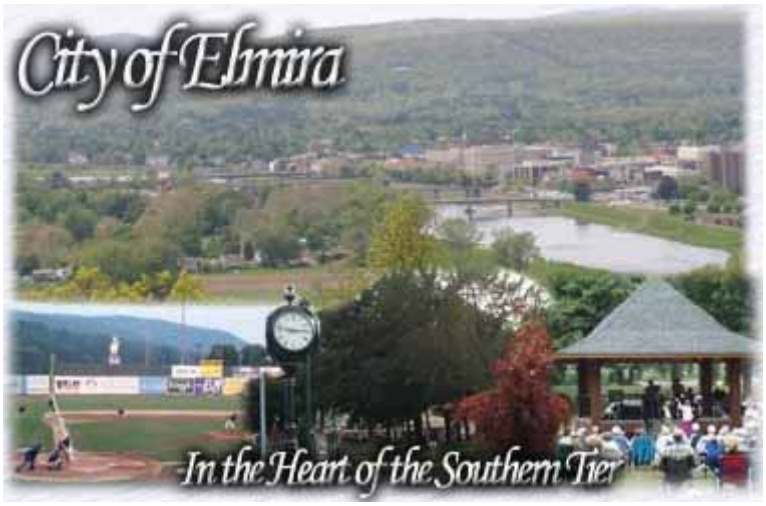
New service for the Northeast business traveler will begin soon, when the Pan Am Clipper Connection adds two new cities to its route structure. Service to Elmira-Corning Regional Airport, in Elmira, New York commences on September 6th. Later in the month, on September 19th, the airline will begin service to Baltimore/Washington International Airport.

The Pan Am Clipper Connection initiated commuter air service in March, 2004, between Trenton Mercer County Regional Airport in Trenton, New Jersey and Hanscom Field in Bedford, Massachusetts, with continuing service to the airline's home base at the Pease International Airport, in Portsmouth, New Hampshire. Trenton Mercer Regional Airport (TTN) is a perfect metro-convenient airport for passengers traveling to and from both New York City and Philadelphia, while Hanscom Field in Bedford, MA (BED) is just twenty minutes from downtown Boston. This route quickly became the airline's most successful route to date, and currently offers passengers five round-trip flights per day, Monday through Friday, with one connecting flight to Portsmouth.

Pan Am flies a fleet of Jetstream 3100, 19-seat turbo-prop aircraft on all of these routes. This Pan Am Clipper Connection Jetstream service is catered to the business traveler looking for convenient service into major metropolitan cities, without the hassle of large hub airports. Now the passengers who utilize these flights are asking for additional service, and we are ready to move forward with service to their preferred destinations.

About Our New Cities

Elmira-Corning Regional Airport, in Elmira, NY is centrally located to serve a large portion of southern New York State and northern Pennsylvania. While the area is already anchored by a strong and diverse mix of local and regional companies, the Elmira-Corning business community continues to engage in growth and development efforts throughout the region. Many of Elmira-Corning's current enterprises have ties to other cities served by Pan Am. Pan Am is excited about its new partnership with Elmira-Corning Regional Airport and looks forward to exploring other growth opportunities from the area.



Service to Elmira will start with six daily non-stop fights: two to Bedford, MA, two to Trenton, NJ and two to Baltimore/Washington D.C.

Service to our nation's capital has always been on the top of the list for Pan Am passengers. Pan Am is pleased that we are now able to offer this service, via **Baltimore-Washington International Airport**. Service to BWI will begin with three flights per day: two non-stop flights to Elmira, NY and one non-stop flight to Trenton, NJ, with continuing service to Bedford, MA.

The Clipper Convenience Travel Program

Traveling for business is most efficient and convenient when our passengers take advantage of membership in our *Clipper Convenience* Travel Program. This program provides the business traveler with some of the most advantageous options any such program can offer. Some of the benefits available through the *Clipper Convenience* Program include:

- Tickets are *transferable* from person to person;
- *Unlimited Changes* allowed in travel itineraries without any service charge fee;
- Black-Out dates are *not applicable*;
- *No travel restrictions* applicable;
- *Fares remain the same*, whether travel is reserved for tomorrow or next year;
- *Member-only* sales specials and promotions.

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PAN AM SERVICES
THE PROS WITH THE HOSE!

Since the rebirth of Pan Am in the late nineties, Pan Am Services has provided the necessary support to help manage its 727 and J-31 operation. Some of the services we provide are: fueling (both single point and over the wing), de-icing, lavatory and portable water. We also have a five tank fuel farm with the capacity to hold 100,000 gallons of Jet A. Our fleet of fueling trucks consists of...

8000-gallon Jet A truck
6000-gallon Jet A truck
3000-gallon Jet A truck
2000-gallon 100LL truck
150-gallon 100LL trailer

With the diversity of our fuel trucks we can meet all Pan Am fueling needs, whether it is 4500 gallons on a 727, or 150 gallons on a J-31. All Pan Am Services staff are specifically trained for 727 and J-31 operations, which is why we have provided safe and efficient service for the last seven years. Pan Am Services is a proud division of Pan Am Systems. Please call 1-800-424-0350 or e-mail us at www.panamservices.com if we can be of service!

Contributed by:
Jason Brooks
Pan Am Services

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