

# Mohegan Pequot Model Railroad

<http://www.geocities.com/Heartland/Lake/9467/index.html>



## The News for: August 2002

### REGATTA TRAIN 2002

by Richard K. Peiffer

The 8<sup>th</sup> of June 2002 marked the 150<sup>th</sup> anniversary of America's oldest inter-collegiate event: the Yale-Harvard Regatta (or Harvard-Yale depending on your preference). It was also the second time since 1970 that an observation train was part of the event. The first was on the 3<sup>rd</sup> of June 2001, and it paced all three races up the east bank of the Thames River. Then came Sep. 11<sup>th</sup> and the picture changed. Passenger trains were essentially embargoed from going through the Naval Submarine Base on the Providence & Worcester Railroad. Even the twice-daily freight trains were searched and guarded while they traversed the length of the base.

Planning for an observation train for the 2002 Regatta was done with the idea of running up the west bank of the Thames River on the New England Central Railroad (former Central Vermont Railway). The train would be the same as last year: Shore Line East GP40PH-2 diesels and demotored Budd SPV cars. Then, with only two weeks to go until race day, the train became unavailable! Now what to do?! The schedule (from New Haven and back) ticket prices, capacity and a host of other details would change no matter what equipment we could get (if any).

That's when the Calvary showed up in the form of the Vermont Railway. They were able to part with two locomotives, four coaches and a café car from their Green Mountain tourist operation at Bellows Falls, Vermont. Their train is not

allowed on the Northeast Corridor, so the trips would begin at New London and passenger capacity would be cut in half. No matter, we had a train!

The trip for the crew began at 2:00 PM Friday from North Walpole, New Hampshire and they brought the train (over 240 miles) into New London at 10:30 PM. Now the question was (noting the Federal Hours of Service Law is twelve hours continuous duty), could one crew run the train for the races (three hours plus positioning, loading and unloading) and then get the train back to Bellows Falls without getting stranded on the road? Time would be critical.

Saturday dawned sunny and cool, perfect for an excursion in steam era, open window coaches. The cars are all vintage Jersey Central commuter coaches (one converted to a café car) and in splendid condition. The locomotives are General Motors GP40 diesels. The train is only one part of the festivities. New London City Pier is festooned with booths, banners and people here for "Celebrate Regatta" and "Saturday Marketplace" which combined open the summer season for the area. This was the first time in many years that there has been this much activity surrounding the boat races. That the train was parked between the station and the pier only added to the crowd's anticipation for the events to follow in the afternoon.

At 2:00 PM, the crew and car hosts were on station and at half past the hour, the train was ready to board. Nine minutes later, we were on our way. Having hosts in the train

helps expedite seating and keeps the main access to City Pier from being blocked for a great length of time. The train moved out of New London Union Station, wound over the curved wooden trestle across Winthrop Cove and passed the Central Vermont yard under Interstate 95. The roundhouse here was arsoned two months ago leaving the area with one less historic railroad structure.

The train was positioned on the Smith Cove Bridge for the start of the first race. Then the news came that the race would be delayed by one hour due to wind and waves. The sculls have a freeboard of mere inches and even a light sea breeze will cause swells that will swamp them. Now the time the races will take becomes even more critical for our crew. At 4:15 PM, the first race finally began.

Our engineer easily kept pace with the rowers on the river as Harvard and Yale fought for good water and the lead. Actually, Harvard ran away with all three races (sorry Yale) but the revelers aboard the train were in good spirits (literally) for both winners and losers. Each race is slightly longer with the last one beginning under Interstate 95 at the Gold Star Bridge and going four miles upriver to The Bartletts opposite Red Top: the Harvard boat house.

Our return to New London was marked by cheers and blaring horns. Our passengers (including two dogs) had a unique experience to tell the folks at home about. In fifteen minutes the train was unloaded, clear of the crossing, cleaned, secured and ready to depart. At 7:00 PM the Vermont Railway train left town. The trip back was made with no delays and at passenger train speed most of the way. The track gangs have been hard at work this season, as numerous slow orders are now history. Arrival time at Bellows Falls was 1:25 AM, back in plenty of time!

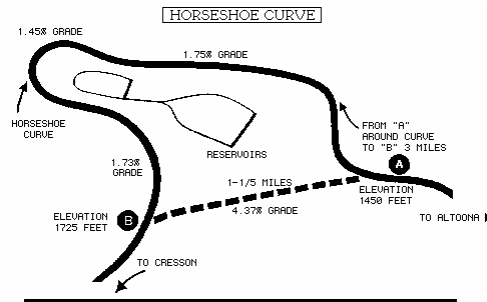
Six months, over sixteen organizations and sponsors and a legion of volunteers went into the planning and operations to take 300 passengers on an afternoon excursion to see the 150th anniversary

Yale-Harvard Regatta. The weather, contestants, railroaders and volunteers all put on a great performance for the event. It will not soon be forgotten. Planning for next year's race begins in July!

### **Big Altoooooona Article!!**

by ???

Leave space for some dedicated Club Member to write about the recent trip to the area (include digital pictures).



### **Club Business**

Meeting results and other day-to-day activities of the working of the Club will be reported in this section.

### **Scraps from Club Meetings**

(From the Club Vice-President's notes.)

Not much going on here. The July meeting was held on the steps of the Bill Library in Ledyard and was mostly about planning for the Altoona trip. See Altoona article.



## Meetings, Operating & Work Sessions

The only meeting in August will be held on Sunday the 18<sup>th</sup> at the Bill Library in Ledyard, CT at 7:30 PM. Work sessions on the new passenger modules will continue to be held at Henry Curtis's house at 18 Susan Terrace in Waterford on Wednesday evenings starting at 7:00 P.M. If you come it would be helpful if you bring some tools so people don't stand in line waiting for the only soldering iron or rail nipper. The passenger modules will remain at Henry's throughout the summer. An operating session will be scheduled at Larry Southwick's house sometime in August. Look for an e-mail on the subject if it is scheduled before the August 18 meeting.

## The President's Corner

The President went to Altoona and nobody has heard from him since then.

## Update on Club and Other Shows

John Waller is the show chairman. He can be reached at 860-564-3114 or by e-mail at [john.waller@snet.net](mailto:john.waller@snet.net) In order to have a good show this year we need your help. John is waiting to hear from you.



## M&P Field Trips

Jim Delany (889-4029) is the coordinator for Club trips to railroad and trolley

museums and historic sites, railroad stations, train rides, train watching locations and club and private model railroad layouts. Call him for the latest information. Nobody who has gone on a Club trip has ever had a bad time. Get onboard for the next one.

## M&PMRR Officers & Functionaries

<b>The President</b>	Dan Delany	537-3610
<b>Vice President</b>	John Waller	564-3114
<b>Treasurer</b>	Gary Domer	848-0690
<b>Secretary</b>	George Harran	443-0707
Storekeeper	Larry Southwick	535-2996
Bulk Purchases	Bill Evans	267-9482
Meeting Speakers	Bill Evans	267-9482
Layouts/Name Tags	Stu Dom	536-7637
New Passenger Module	Stu Dom	536-7637
Field Trips	Jim Delany	889-4029
Newsletter	Clark Pritchett	444-1884
Club Web Page	Ross McLean	669-9841
Train Shows	Ron Pothier	<a href="mailto:repth@snet.net">repth@snet.net</a>



## Member News

New members, old members, wannabee members or shouldbee members. Let's hear from you or your friends.

## John Waller's Column

The 50-car train, each car filled to the brim with top-quality black coal, behind four new gleaming AC locomotives, was right on schedule heading for one of the nation's largest power stations. The track was of the highest standard; continuously-welded rail held on to reinforced concrete ties with Pandrol clips. Suddenly a car derailed causing a major headache for the train crew and the railroad as a whole. What went wrong? A roller bearing on one of the cars had disintegrated without warning.

In June 1994 I attended a Town Hall meeting at the Chicago Technical Center on freight car roller bearing inspection. As an aside, on the flight into Chicago, the plane was full of Austrians in Alpine garb, in a

merry mode indeed, on their way to the World Cup.

The “hot box, or hot bearing detector” (HBD) was developed in the 1960s to identify failing friction bearings. A friction bearing gives reasonably positive indications that it is overheating for some time before actual failure occurs, allowing HBDs to be placed several miles apart. By the time of the Town Meeting, tapered roller bearings had been introduced in freight cars. The numbers are staggering, involving 10 million bearings on 1.25 million freight cars on the North American continent.

Unfortunately, roller bearings only start to heat up in the last few seconds before catastrophic failure. The axle journal fails in turn, and the unrestrained wheel set nearly always causes a derailment. With a steady increase in line utilization, line capacity limitations, and the “just in time” delivery practice demanded by customers, any interruption due to derailment or any other cause, is becoming steadily less and less welcome.

One of the solutions being tried is to measure the acoustic output of roller bearings as they pass a trackside station. This was why I attended the meeting on behalf of Analysis & Technology, Inc., to see if our acoustic, vibration, and infrared knowledge could be brought to bear on the problem. It turned out the Federal Railroad Administration (FRA), who was co-sponsor for the meeting, had no funds whatsoever for any R&D program, but were hoping someone had an off-the-shelf solution. We never got involved.

The Burlington Northern representative reported that a prototype acoustic system had been tried on their railroad, with some success. He asserted that these results, though impressive, came at a high price in maintenance; presumably much “tweaking” was involved.

Two mechanisms were identified as the major contributors to roller bearing damage;

- Brinelling: indentations in the roller element caused by being forced against the inner or outer raceway during impact loading.

- Spalling: the propagation of minute cracks which increase in size during cyclic loading, eventually causing metal breakout.

Bearing seizure occurs when the rollers and the raceways become locked together. It can occur suddenly and catastrophically. Cone slippage failure is where the interference fit between the cone bore and the axle journal become excessively degraded. Temperature increases very rapidly and softens the journal which yields under the load of the car.

The acoustic detection method attempts to identify particular frequencies which are related to wheel rotation speed, number of rollers, and other bearing parameters. It is the classic signal detection problem, with four possible outcomes:

- A bearing in real danger of imminent failure is detected (a desirable outcome).
- A bearing in real danger of imminent failure is not detected (a type I error, or error of omission).
- A bearing in no immediate danger is declared unsafe (a false alarm, type II error, or error of commission).
- A bearing in no immediate danger is declared safe (a desirable outcome).

There are costs involved in both types of errors. The type I cost, unexpected disruption of service, has already been mentioned. The type II cost is taking a car out of service and inspecting or changing a bearing for no good reason. Of course, these costs are different from each other, and a tradeoff can usually be made by adjusting the sensitivity of the acoustic detectors (no doubt part of the tweaking).

Another detection method discussed was to look at the infrared signature, as opposed to just the average temperature measurement used by the HBD. This seemed to have some promise if the differential temperature between two parts of the bearing was logged, with an abnormally high difference being a warning sign, and a more sensitive indicator than just overall temperature. The disadvantage of this method is that it cannot

always be done with trackside instruments, but with instruments mounted on the truck, as the detectors must be focused on particular locations on the bearing. This, of course, requires an electrical power supply.

Another factor in using trackside equipment to observe a bearing signature, either acoustic or infrared, or perhaps both, is that the measurements are concerned with how the bearing characteristics have been changing over time, that is, the history of each bearing needs to be known by the trackside equipment, or at least at the analysis station to which data are being sent. This is quite a daunting requirement. The proposal to fit all cars with a bar code, and providing an electrical bus throughout the train, was mentioned at the Meeting. These features would have usefulness beyond detecting bad bearings.

I spoke to one of the acoustic method advocates on the way home from the meeting. His take was the acoustic methods had already solved the problem, despite what was said at the meeting; not much mileage for me there, obviously. I have not kept track of the problem since the meeting, but, knowing how these things go, I would not be surprised if there has been little progress.

*John Waller*

Editor's Note: It seems like no monitoring system will be useful unless very early and reliable indicators of bearing failure can be found. Then the car can be bad ordered in the yard and the bearing can be changed before they fail and seize. Is the engineer going to stop the train on the mainline if the alarm says that bearing failure is imminent? Probably not. Even if they did how would you pick a car out from the middle of the train on a mainline a hundred miles from civilization and no siding available?

There might be another approach to solving this problem but it is potentially expensive; over-design the bearings on freight cars. Go up to the next larger size and see if bearings with higher than the required capacity fail at significantly lower rates. Then run the costs of derailments vice

the additional cost of cars with larger bearings. It always comes down to economics.

## **The Market Place**

### **Club Member Ads**

Advertise (free) here to reach many model railroaders eagerly waiting to buy your wonderful stuff. Editor's Note: Let me know when your item sells or when you want to stop running the ad.

**Help Needed for Train Show:** Clark Pritchett is looking for someone to help at his table at the New Haven Train Show on August 18. Call him at 860-444-1884 or e-mail to [modlrrnews@aol.com](mailto:modlrrnews@aol.com).

### **The Club Store**

The Club carries a number of items commonly used by model railroaders.

### **The Storekeeper's Report**

A sign up sheet may be passed around at the next meeting for those wishing to order new club attire. The intent is for us to all be looking our best for our club show in October.

## **The Technical Section**

Contributions are always welcome. You can write about anything from prototype to model railroads. Scenery, electrical, benchwork, model building and more are all of interest to the club members. We always need technical articles.



## **Model Railroad Calendar**

### **This Month in 2002**

**August 18, Ledyard, CT** - The only Club meeting of the month will be held at the Bill Library in Ledyard, CT starting at 7:30 PM.

**August 18, New Haven, CT** - All Gauge Train Show at Yale's Lanman Center/Payne

Whitney Gym 72 Tower Parkway. Call 203-239-1346 or e-mail [www.AFSTrains.com](http://www.AFSTrains.com)  
**All August Wednesdays, Waterford, CT** - Club work sessions will be at Henry Curtis' house at 18 Susan Terrace. Bring tools to complete the new passenger modules.

### Next Month and Beyond

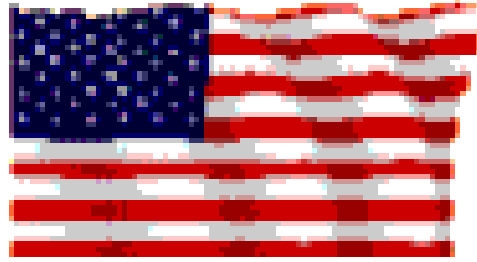
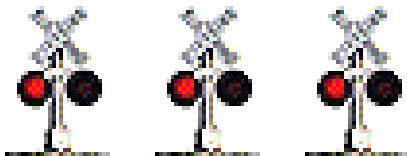
**September 4-8, Warwick, RI** "The Narrow Gauge Convention at the Crowne Plaza Hotel at the Crossings in. For additional information, check out the website at: [www.22ndnngc.com](http://www.22ndnngc.com), phone: 508 996 0174 or e-mail [jeb143@aol.com](mailto:jeb143@aol.com)

Ron Pothier's list of train shows for the year is available from him at [repth@snet.net](mailto:repth@snet.net)

### Newsletter Items

The Club has a post office box that can be used for newsletter mailings and other Club purposes. The mailing address is; P. O. Box 55 Quaker Hill, CT 06375-0055 E-mail enclosures can now be opened and electronic versions are preferred to handwritten copies so retyping is not necessary. Microsoft Word and other compatible word processing programs should be used. You can also send items by E-mailing them to [modlrrnews@aol.com](mailto:modlrrnews@aol.com) If you do send something, it is a good idea to phone and say that you sent it since unwanted e-mail is constantly filling the system and I dump it before reading. Say M&P newsletter article in the subject line. The deadline for submissions is one week before the end of the month.

Clark Pritchett, Editor



*The Lighter Side*

**The World Wide Web**