



A Publication of the Railroad Model and Historical Society of Southeastern Ohio, Inc.

PO Box 1, Albany, Ohio, 45710

May 2014

**Upcoming Events:**

**May 13, 2014**

Club Meeting  
7:00pm  
Kenny Shanks' Garage  
7 4th Street, Jacksonville  
Bring something for show and tell!

**May 29-June 1, 2014**

Club Trip  
Streamliner's at Spencer  
Spencer, North Carolina  
Admission: \$20+  
20+ Attending Locomotives, Nighttime Photo Opportunities, Special Operations, Many More Exhibits Throughout the Museum Grounds

**June 21-22, 2014**

Miami Valley Rail Festival  
Dayton, Ohio  
Admission: \$8  
Model Train Displays, Historical Displays, Live Steam, Vendors, Miniature Train Rides

**June 29, 2014**

Annual Club Picnic  
Marion, Ohio  
Leave SEOVEC by 9:00am  
Club Layout Will Be Open, Station Will Be Open, 3 Double Track Mainlines

**July 12-13, 2014**

Model Railroad Show and Swap  
Van Wert, Ohio  
Admission: \$3  
Operating Layouts, Vendors

**July 26-27, 2014**

Cowen Historical Railroad  
Festival Train Show  
Cowen, West Virginia  
Admission: Free  
Operating Layouts, Exhibits, Railroad Artifacts, Miniature Train Rides

**Train Wrecks**

Lionel LLC Official Blog - September 13, 2013

Railroads are one of the safest methods of transportation around, but combine thousands of tons of steel and cargo with the laws of physics and when accidents happen, they can happen in a really big way. Despite their rarity (or maybe in part because of it), the magnitude of a train wreck is sure to capture the eyes of the public and even become the story of legend.

These accidents can occur for a great variety of reasons. Environmental factors, equipment failures and human error top the list of general causes. Bad luck (it is Friday the 13th) generally has nothing to do with it but railroad tales of lucky and unlucky trains, engineers and locomotives abound. More than one "cursed" locomotive has been sold after a wreck simply because nobody wanted it around anymore.

More than superstition, there is a great science around train wrecks. Over the years, the causes of train derailments have been scrutinized and studied in great depth. Each accident is treated as an opportunity to learn and correct problems to prevent a repeat occurrence. The studies can result in changes to equipment design or operating rules or even

prompt new legislation.

Signal systems, automatic train stop, "dead man" peddles – even the new ATC control systems are all the result of searching for solutions in technology. From the safety appliances of the 1800s to modern shelf couplers each technological advance has helped to make the trains safer for workers, travelers and the public at large.

It is said that the railroad rule book is written in blood, each one of those rules being the result of an earlier accident. These cover everything from train handling to the proper way to get on and off equipment. Twisted steel and twisted ankles – both can be prevented.

In some cases, rules to prevent recurring train wrecks go beyond the railroad rules and into regulations which govern the entire industry. Hours of service and drug testing requirements are just two examples of modern safety regulations which can trace their origins to disasters.

Sadly, the most common railroad accidents are also among

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# Train Wrecks

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the most easily avoided. Collisions between vehicles and pedestrians and trains at railroad crossings and along the right-of-way seem so easy to prevent and yet they remain a problem despite the best efforts by the railroads, governments and groups like Operation Lifesaver. No matter how well protected the crossings may be, the best defense against these tragedies is an informed public. You can do your part to promote awareness in your community, and practice what you preach when you are out watching trains.

Most derailments are hardly headline worthy. A simple wheel on the ground can usually be corrected with nothing more than a few blocks of wood. The more serious incidents usually occur at speed where the effects are magnified by the mass and momentum of the train.

A sudden stop will send the back of the train crashing into

the front as the rate of deceleration exceeds the air brakes' capacity. This creates the "accordion" effect of cars stacked at right angles to the track or even piled on top of each other. Loads like steel beams and wood poles become missiles. And the twisting, tearing and cutting of metal can go beyond what any freight car engineer could build for. Cars containing hazardous materials are always the first concern.

In earlier years, railroads maintained their own wreck trains. Ready to go at a moment's notice, these trains were stationed at major yards and could be dispatched quickly to the site of a derailment. A wreck train had priority over every other train on the line. In addition to the "Big Hook" the train would include cars of replacement track and wheels, tools and even bunk and kitchen cars for the wreck crew which would stay on site until the tracks were opened.

Today these duties are normally contracted out to specialized wreck crews which cover entire regions. Large tractors have replaced the wreck cranes and the equipment and crew can normally get there faster by road than rail. Now as before, the priorities remain to secure the scene and any hazardous materials, protect property and lives, and reopen the railroad as soon as possible. Wrecked cars may sit beside the tracks for days or weeks once the railroad is opened as investigators and claims workers sort out the pieces.

Despite the fables and movie story lines, there is nothing glamorous about a train wreck. Each one represents the potential for serious damages and loss of life. Nevertheless, they will continue to have a presence as long as trains continue to battle the elements, human nature and if you will, bad luck.

## **"You know you're a Railfan if..."**

[http://www.mswphoto.com/IdiotRailfan/you\\_know.html](http://www.mswphoto.com/IdiotRailfan/you_know.html)

Your car has a bumper sticker that says "This vehicle stops at all railroad crossings."

## **"Hobo Humor"**

[http://www.spikesys.com/Trains/rr\\_jokes.html](http://www.spikesys.com/Trains/rr_jokes.html)

Why is the track gauge 4' 8.5"?

It's the mean distance between the neck and ankles of damsels in distress.

# Rail Companies Look at Natural Gas Locomotives

By: Josh Funk, The Associated Press, January 23, 2014

The diesel-burning locomotive, the workhorse of American railroads since World War II, will soon begin burning natural gas — a potentially historic shift that could cut fuel costs, reduce pollution and strengthen the advantage railroads hold over trucks in long-haul shipping.

Rail companies want to take advantage of booming natural gas production that has cut the price of the fuel by as much as 50 percent. So they are preparing to experiment with redesigned engines capable of burning both diesel and liquefied natural gas.

Natural gas “may revolutionize the industry much like the transition from steam to diesel,” said Jessica Taylor, a spokeswoman for General Electric’s locomotive division, one of several companies that will test new natural gas equipment later this year.

Any changes are sure to happen slowly. A full-scale shift to natural gas would require expensive new infrastructure across the nation’s

140,000-mile freight-rail system, including scores of fueling stations.

The change has been made possible by hydraulic fracturing drilling techniques, which have allowed U.S. drillers to tap into vast deposits of natural gas. The boom has created such abundance that prices dropped to an average of \$3.73 per million British thermal units last year — less than one-third of their 2008 peak.

Over the past couple of years, cheap gas has inspired many utilities to turn away from coal, a move that hurt railroads’ profits. And natural gas is becoming more widely used in transportation. More than 100,000 buses, trucks and other vehicles already run on it, although that figure represents only about 3 percent of the transportation sector.

The savings could be considerable. The nation’s biggest freight railroad, Union Pacific, spent more than \$3.6 billion on fuel in 2012, about a quarter of total expenses.

But even under the most optimistic scenario, there’s no way all of that diesel will be replaced. Railroads and locomotive makers are looking primarily at ways to retrofit existing machines to burn a mix of diesel and natural gas because that will be the quickest and easiest way to adopt the new technology.

Locomotive makers have not yet set the prices of their retrofit kits, but railroads expect they will be cheaper than a new locomotive costing roughly \$2 million.

Using both diesel and natural gas also offers some advantages over using natural gas alone. The diesel can provide the spark needed to ignite natural gas without redesigning locomotive engines, and the diesel helps provide horsepower.

Railroads are planning to use liquefied natural gas, which is not as readily available as other forms of gas because it must be cooled to

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- \$80 for a family membership for 1 year

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- Voting
- Several great trips throughout the year
- Friends who share a common hobby

# Rail Companies Look at Natural Gas Locomotives

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minus 260 degrees. That step adds to the price, but the amount varies based on how the process is done.

“It’s so early in this that we’re still working to understand the potential savings,” said Louis Renjel, vice president of strategic infrastructure at CSX railroad.

The projected cost comparisons do not include the millions of dollars railroads would have to spend on a network of natural gas fueling stations along their tracks. That expense won’t be clear until after the tests, when railroads decide whether to build their own liquefaction facilities or just store fuels.

“There are a lot of factors that aren’t accounted for yet,” said Michael Iden, who oversees locomotive engineering at Union Pacific.

Locomotive makers say natural-gas engines could also significantly reduce emissions compared with diesel locomotives, but the potential cost savings is the biggest reason the rail industry is eager to make the change.

From the outside, natural gas locomotives will not look much different, but they will have to pull a tank car behind the engine to carry enough liquefied natural gas, or LNG, to have a similar range to diesel units.

Both of the major locomotive manufacturers, General Electric and Caterpillar’s Electro-Motive Diesel, have developed prototypes that will be tested by Union Pacific, CSX, BNSF and Canadian National railroads beginning this year.

If the projected cost savings are realized, railroads would improve their profits and better compete against trucks, where they already hold the advantage on deliveries longer than 500 miles.

“They can lower their costs further and widen their advantage over trucks,” Edward Jones analyst Logan Purk said. But he sounded one note of caution: Natural gas prices have always been volatile, and they could climb if gas exports expand significantly and more industries switch over to natural gas.

Another issue is the design for the fuel tender cars that will haul

liquefied natural gas for the locomotives. That’s something that will have to be standardized because the major freight railroads regularly pass locomotives back and forth to keep trains moving efficiently.

Once they agree on a design for the tenders, the railroads may have a hard time getting enough of them because tank car manufactures are already struggling to keep up with demand. Customers sometimes wait up to three years for new tankers.

This isn’t the first time railroads have flirted with natural gas locomotives. Both Union Pacific and BNSF spent several years working on the concept in the late 1980s and 1990s, so the industry isn’t starting from scratch.

Industry officials say the rising natural gas prices that helped scuttle their earlier experimentation with the fuel should not pose a problem this time because significant new sources of natural gas are now available.

## Our Mission

*To Teach...*

*Those who want to know more.*

*To Educate...*

*Those who want to learn the history.*

*To Promote...*

*The hobby with enthusiasm.*

*And to share and enjoy the pleasure of all that is Railroading.*



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