

## The Burlington Route 13501 Waycar and the Motor Cars



The first recorded use of a caboose as such was in the 1840s on the Auburn & Syracuse Railroad, later a part of the New York Central. The Conductor would carry out his business while sitting on a wooden box at a wooden upended barrel in an old wooden boxcar which also contained his tools. The boxcar was at the end of a mixed freight-passenger train.

The earliest known use of a caboose as a word was in 1855, and it referred to the Conductor's car. This was on the Buffalo, Corning & New York Railroad, a predecessor of Erie-Lackawana and Conrail.

The earliest cabooses were often flatcars with a shanty or cabin built on the deck, but more common was a boxcar fitted with windows, side doors, bunks, stove, desk, and equipment storage. They sometimes doubled as baggage or passenger cars. These early cabooses lacked the distinctive feature of the car as we came to know them, that is the cupola.

The most widely accepted version of the origination of the cupola is credited to Conductor T. B. Watson of the Chicago & Northwestern. It is said that his regular flat-topped caboose had been temporarily assigned to a work train, and an old boxcar was tacked onto the rear of his regular Cedar Rapids to Clinton freight train one summer day in 1863. The car had a hole in the roof, and Mr. Watson piled some boxes so he could sit with his head and shoulders projecting above the roof. From this vantage point, he was able to watch all around the train and at the same time make an inspection of his train. Realizing the benefit of this, it is reported that he contacted the Master Mechanic at his terminal of Clinton, IA where two new cabooses were under construction. He prevailed upon him to complete these two cabooses with the 'lookout'. The Master Mechanic agreed, and the C&NW became the first railroad to operate cabooses with cupolas.

With new labor agreements on the nation's railroads and the conductor riding in the locomotive, the caboose has disappeared from most freight trains in North America. The function of rear end vigilance has been assigned to an end of train (EOT) flasher, or flashing rear end device (FRED), an electronic device which is battery powered and mounted on the rear coupler. FRED measures air-brake pressure, radios the information to the cab and provides a flashing warning light for following trains.

### **THE WAYCAR OR "CABOOSE" 13501**

CB&Q 13501, the NE 10 class caboose, was one of the first class of steel waycars built by the CB&Q. They were also the last group of waycars built at the Aurora Shops in Aurora, IL. The NE 10s were also the only group of steel waycars to see extensive use with steam power. CB&Q 13501 was built in February 1930 and retired in December 1982. Following retirement, the car was donated by the Burlington Northern to the Galesburg Railroad Museum.

Earlier cabooses were of wood construction. In wintertime the old wooden sides would contract and frost would form on the inside. It was not really a comfortable home away from home for the train crews. The 13501 also contained a toilet. Earlier cabooses had no toilets.

In this caboose the Conductor did the book work and made out his reports at the desk while the Rear Brakeman rode in the cupola on the side of the air brake. When the train went around a curve to the left, the rear brakeman would move over to the other side to inspect the train to determine if something might be dragging, if the brakes were all released or if there were any hot boxes. When approaching a station or a track gang, he would get out on the rear platform for an inspection report from the track gang or the agent-operator.

If they were passing a station where there was an Agent or Operator on duty, he would be ready to catch a message or train orders, if any. It was the duty of the Agent or Operator to be out on the platform for every passing train to inspect it. If there were no problems, he would give the rear end of the train a high ball. If there was a problem, he would give them a signal to indicate what he saw, such as brakes sticking, hot box or something dragging. He did this by standard body motions or signals.

When the Conductor finished his book work, he would get up in the cupola along with the Rear Brakeman so that both sides of the train could be inspected as it moved along.

The air brake valve is along the side of the seat and it is to the train line. There is an air gauge on the wall indicating how much air is in the train line. Should the rear end crew see trouble in the train and they could not get the attention of the head end crew by flagging them from the window of the cupola or the platform, they would pull the air lever back to the first notch. This would pull off 10 pounds of air from the train line. If the train did not start to stop, he would draw off an additional 10 pounds by moving it back another notch. This would get the engineer's attention because he would feel the train start to drag and then he would look back. The Engineer also had a gauge in front of him similar to the one in the caboose, and he would be able to see the air pressure drop.

The Conductor had considerable book work to do. He would have to list all the cars in his train by initial and number, whether empty or loaded and, if loaded, its contents, tonnage and routing. This information was taken off the waybill which accompanied the car from origin to destination. If cars were to be set out at a station along his run, the Conductor would leave a list of the cars and the waybills at the designated point at that station or with the person on duty at the station or connection. He would also make out a delay report to indicate where on that run they stopped, how long, and for what purpose and also the times. He would turn in the delay report at the terminal end of his run.

The Rear Brakeman was sort of a housekeeper on the waycar. He would keep the floor and windows cleaned. When he reported for work, he would check to see that all oil lamps were filled (this was before the cabooses were electrified), that the supply cans in the storage area were full, that the hot box cooler was full of water, that the drinking water can was full, and that the flagging equipment was on hand and the torpedo and fusee racks were full. In winter he had to be sure the coal box was full and in summer the ice box. The tool box had all the equipment they may need to make repair on the train in case of trouble such as hoses or knuckles. These could be found in a shed along the waycar track near the yard office. When the waycar was supplied and ready to go, he would put the rear marker on so the switch crew knew that the caboose could be picked up and placed on the train when it was ready for departure.

The Rear Brakeman was required to do the flagging for the train if it was required after they left the yard. On trackage with automatic block signals, he did not have to go far from the waycar to provide flag protection while they were stopped. On sections of track not in automatic block signal territory, he would hit the ground as they stopped, flagging bag in hand and walk back a sufficient distance to stop any train coming up behind them. Some railroads required that he go back as far as two miles. This would be in any kind of weather, and he could

not return to the train until called in by a whistle signal from the Engineer. If another train came up behind them, he could take them up to his train, and the rear brakeman on that train would go out to protect.

Each regular conductor would have a caboose assigned to him. The brakemen would bid onto that waycar with the conductor with whom they liked to work. However, assignment was made based on seniority. A rule of thumb was that on each crew of one conductor and two brakeman, the senior brakeman would work on the waycar and the junior brakeman would work on the head end or engine. Some conductors would switch them around on each trip according to his preference.

The table and cupboard for food was standard in most waycars. One person in the crew was assigned at the home terminal to secure food for the next trip and assigned to do the cooking. The cost was split between the three crew members. Seldom would the engineer or fireman eat in the waycar away from home. They generally ate in a bunk house and brought their food with them from home. On work train assignments, however, it was not uncommon for the engine crew to eat in the caboose. The cooking was done on the coal stove in the caboose.

The conductor and brakemen slept in the waycar on the rather hard beds. Their sleeping rolls would be put underneath the bunk next to the tool boxes. The sleeping rolls consisted of blankets and spreads the men brought from home, not sleeping bags as we know them today. During winter these would be not too warm after being in cold cabooses for many hours.

## **The Motor cars, Switch Stands, and Crossing Signals**



The hand throw switch stand by the fence at the south end is one piece of equipment that has not changed over the years and for which there should always be a need.

When the red target is parallel to the track, it tells the crew that the switch is lined for straight track. When the red target is turned to show red across the track, it alerts the crew that the switch is lined for a turn off from the track that is being used. Hand throw switches must be locked at all times.

The smaller motor car is called a track car and was used by an employee who would be on the track by himself. This would be a Track Rider or Track Inspector, Signalman or Lineman. The car is light enough for one person to put it on or off the track at a motor car set-off. A motor car set-off was constructed of ties placed perpendicular to the rails onto which the motor car could be turned and placed. Road crossings were not to be used for getting off the track unless there was an emergency.

The engine on the rider car is a five horsepower two cycle Fairmont air cooled engine made in Fairmont, Minnesota. You could put the car in reverse without stopping by shutting off the engine, putting the lever in reverse, starting the engine and backwards you went. There was a canvas curtain which could be placed around the car to protect the operator from the weather. The black box acts as a heater which collects the heat off the

top of the engine and brings it up above the deck. This item was not added to the motor car until the middle 1900s. Prior to that the only heat the operator got was what would raise up through and around the deck.

A car of this type would be used by the Track Inspector in patrolling a 60 to 70 mile segment of trackage assigned to him. He would patrol the whole segment one day and then return the next day to his headquarters location. He checked for broken rails, missing or broken bolts, low spots, spread rail or any condition that might affect the operation of trains. If it were a problem he could not repair himself, he would instruct the section foreman and his gang to make the repairs. There would be as many as six to eight section gangs on his territory, and most repairs were done by hand. Today repairs are usually done with mobile mechanical equipment.

This class of motor car was also used by a lineman, also called a Division Lineman. This person patrolled the track looking for any condition in the wires, poles or crossarms that could affect telegraph communication. The lineman also checked battery wells located along the track to be sure they were in working order. The wells contained a mixture of water and acid around lead plates which supplied power for the system.

Signalmen also used this smaller motor car as they rode the track in their territory. They would check bond wires between each section of rail and also the battery wells to insure they were fully charged so they would operate the crossing gates and crossing flasher signals. The wells are still in use where there is no electric line. Solar panels are used for power in some places.

Opposite the Track Inspector motor car is a larger car called a Track Gang Car. It has the same type engine as the smaller car except it is a six horsepower engine. This car would be used by a Section Foreman and four or five laborers which made up his gang. The car behind the motor car was called a rubble car and it was used to haul their tools, ties, gravel and whatever else they might need to the work site for the day. These men would work under severe weather conditions and with somewhat primitive tools to keep the track in safe operating condition.

There are two crossing signals of a mechanical nature on exhibit. The one on the left is from the early 1900s and it is called the banjo type because of its construction. This signal was reconstructed for the Railroad Museum by a Regional Signal Foreman who picked up spare parts at various locations and placed it for the Museum with the approval of the Burlington Northern Railroad. As time went on, the banjo type signal was replaced by the type to the right of the viewer and is the type generally being used today. One of the reasons for the change was that the viewer was looking under the red swinging light, and the alternating flashing lights near eye level were much more effective.