

## Restoration of Copper Range Rail Road Cars....



A nice photo of Copper Range Combine #25 when it first arrived at North Freedom in 1963. Photo by Ray Buhrmaster. Check out the status of [Copper Range #60 restoration at North Freedom](#).

### **Restoration of the Copper Range Railroad coach No. 60**

This summer members of the Mid-Continent Railway Historical Society placed the fully restored Copper Range Railroad coach No. 60 on display in time for the start of its 40<sup>th</sup> anniversary celebration of operations at North Freedom. The eight-year project required the services of some 40 volunteers, donating over 8000 hours in restoring the 100-year old railroad coach to a look reminiscent of a time when it last carried passengers along the Copper Range line. Historical accuracy and quality workmanship were critical requirements for a project performed under the direction of the museum's Curator, Don Ginter, and project leader Bill Buhrmaster.

Coach No. 60 is one of more than 120 pieces of historic railroad equipment that is preserved at the Mid-Continent Railway Museum. Mid-Continent focuses on preserving and restoring railroad equipment of the Upper Midwest from the period of 1880-1916, a period formally known as the Golden Age of Railroads. The museum is nationally known for its collection of wood passenger and freight cars. The collection includes 12 steam locomotives as well. The museum is also popular for its 7-mile demonstration ride aboard authentic railroad equipment.

#### **Acquisition and Preservation**

The Mid-Continent Railway Museum purchased coach No. 60 in 1982. In September the car traveled on its own wheels from Wells, Michigan to North Freedom. The car had deteriorated significantly, since it had not been stored indoors for the previous 15 years. The roof was leaking badly, causing water damage to a lot of the oak woodwork. Vandals

that had broken virtually every window in the car aggravated the deterioration. Despite the damage to the interior, the car was found to be very structurally sound.

While awaiting a complete restoration, a new roof was installed in 1984 and the car was stored in the Coach Shed. This is the museum's display building, but minor conservation work continued to take place. After the construction of the museum's Car Shop in 1990, the car was moved into the new shop facility, where intensive restoration work began.

### **Documenting the Car's History**

Coach No. 60 was built as a first-class coach in 1903 by the American Car & Foundry Co. (AC&F) at its Jeffersonville, Indiana works. It was one of six identical cars built for the five-year-old Copper Range Railroad, under AC&F lot No. 2504. They were typical of open-platform wood coaches built around the turn of the century.

This series of passenger cars were the first built by AC&F for the Copper Range. These coaches joined a fleet of Copper Range coaches and baggage cars that had been purchased from Pullman, in 1899. The coach was delivered in a color described as a green, brighter than Pullman green and striped in gold. The interior of the coach was stained and varnished with a Golden Oak finish. In addition to solid oak woodwork, the car had oak veneer headlining and ceiling panels. The seats (62 passenger capacity) were upholstered with cane (rattan). Heat to the car was provided by steam, while lighting was provided by four two-burner kerosene lamps mounted on the ceiling. The car had two four-wheel trucks (8'-0" wheel base) constructed of wood and steel.

The Copper Range Railroad, the last major railroad built into the Copper Country of Upper Michigan, enjoyed a brisk, although short lived, passenger business that required some 30 passenger cars over the years. Maximum trackage operated by the Copper Range never exceeded 150 miles but its passenger trains ran the gamut from the vestibuled *Northern Michigan Special* with the Railroad's own cafe-observation car to the lowly locals serving the various mining communities on the "Range". Considerable equipment was needed to handle the special weekend excursion trains from Calumet and Houghton to Freda Park, a beautiful natural park along Lake Superior.

Starting in 1911 the Copper Range passenger equipment was gradually repainted in the standard "St. Paul" (Milwaukee Road) scheme of orange and maroon. This change took place after the *Northern Michigan Special's* inauguration as a premier Milwaukee Road passenger run from Chicago to Calumet. The *Special's* route included Copper Range trackage from Mc Keever to Calumet. In 1916 electric side lights were added to twelve of the Copper Range passenger cars, including coach #60.

**In 1908, Adams Township high school students were moved to Painesdale from Atlantic Mine under the supervision of Superintendent Fred A. Jeffers and his wife, Cora Jeffers. In 1909, the Copper Range Railroad, at the request of Stanton Township, began a schedule of trains to carry Stanton Township high school students to Painesdale. This special school train was the first and only one in the nation and carried about three hundred children, sixty to ninety to Stanton Township.**

**The train left Houghton at six o'clock in the morning, dropped an empty coach off at Atlantic Mine, and then at Mill Mine Junction it turned west and traveled twenty miles to Freda for the first pickup of students from Beacon Hill, Edgemere, Stanwood (Redridge), Salmon Trout, and Obenhoff, and then back to Mill Mine Junction. There the locomotive would back track to Atlantic Mine and hook up with the coach that had been left there, now filled up with Atlantic Mine students. The train would then head east with some four or five coaches and pick up students in South Range and Tri-Mountain, arriving at Painesdale at 8:30 in the morning with about three hundred students. The high school at that time had an enrollment of slightly more than four hundred children. In the evening, the trip would be reversed.**

**This train, according to the Associated Press, was the only one of its kind in America and ran even through the severest winter weather. The last school train to Stanton Township was in June 1941. The last school train for Adams Township was in June 1944. Since then, Stanton Township high school students have been bused to Houghton, and Adams Township students are bused to Painesdale.**

Passenger service on the Copper Range dwindled to but a few mixed trains by 1930. The Copper Range Motor Bus Co. formed in 1928, plus the new family automobile both contributed to a dramatic decline in passenger business. A small roster of coaches endured the Great Depression and served the Copper Country on the well remembered school trains. Most of the school train service was replaced by busses in 1941. Surplus coaches such as sister cars No. 55, No. 57 and two others, went to Mexico in 1944.

The last hurrah for Copper Range passenger service came on June 1, 1944 when a first class passenger train was re-instituted from Houghton to Mc Keever for a connection with the Milwaukee Road's *Chippewa* service to Chicago. World War II gas rationing made such service a necessity. The train consisted of Copper Range 2-6-0 steam locomotive No. 58 with wooden combination car No. 26 and coach No. 60. Both cars were completely refurbished for the new train. During the 1944 rebuild of coach No. 60, the oak veneer ceiling panels were replaced with painted panels and the rattan seats were changed to red plush (taken from coach No. 51).

Unfortunately, the last vestige of Copper Range passenger service ended abruptly on September 15, 1946. Coach No. 60 went into storage in the Houghton roundhouse. In 1964 coach No. 60 literally got a new lease on life and spent two seasons on the newly formed tourist line, the Marquette and Huron Mountain. Following use on the M&HM, the coach was returned to the Copper Range and once again stored in the Houghton roundhouse. The startup of a tourist railroad at Calumet, Michigan in 1967 resulted in Copper Range 2-8-0 steam locomotive No. 29 and coach No. 60 being sold to the Keweenaw Central Railroad. The total abandonment of the Copper Range Railroad became a reality in 1973, which, in turn forced the Keweenaw Central to discontinue operation rather than face the loss of their rail connection. Coach No. 60 left the Copper Country for all times in December 1972 and was stored at the Wells, Michigan shop of the Escanaba & Lake Superior R.R.

## **The Restoration Plan**

Starting in 1995, museum volunteers from the Curator Department focused their efforts on performing a complete car restoration. The extensive research already performed and documented shaped the plans for accurately restoring every aspect of the car. Although relatively few modifications were made to the car over the years, the Curator determined that the car's restoration could most accurately be performed for the appearance that it had during the passenger service period of 1944 to 1946. In 1944, the Copper Range had replaced the seats, window shades, ceiling panels and baggage racks in No. 60. As a result, it would have been far more costly to reproduce these items and restore the car to its original, as built condition. In the end the plans called for not only a cosmetic restoration, but to also make the car operational for special occasions.

### **The Restoration**

The restoration process on the exterior of the car involved stripping all of the old paint off of the entire car body. Under the yellow paint, initially applied in 1964 by the M&HM, orange and maroon paint (post 1911) as well as green paint (original color) was uncovered. Over 70% of the window frames and all of the deck (clearstory) screens had to be replaced. The poplar car siding and trim was found to be in relatively good condition. Only a small amount of the wood had to be repaired or replaced.

Once all of the wood repairs were made, two coats of primer were applied on all exterior surfaces. For the finish color, three coats of Schreuder Hascolac Brilliant orange paint were applied to the car body. Between each coat of paint the entire car was sanded and cleaned.

Although the car body was in good shape, there was a lot of work required to rebuild the end platforms. The buffers and the original style wood end beams had been removed from the car over 20 years prior. Period photographs have been used to assist in recreating the oak end beams, for the end platforms. The new steps and oak end beams were installed along with reproduced end buffers. In order to assure that the car was safe to use from time to time, the coach was jacked up to allow the trucks and draft gear to be worked on. While the trucks were out from under the car, they were needle scaled and primed. In addition, all of the bolts were tightened on the trucks and draft gear. To assure a smooth ride the truck bolsters and side bearings were shimmed and lubricated.

The interior of the car was found to be relatively intact, but in need of a lot of work. The red plush seats and a good deal of the hardware were still in the car, but in very poor condition. Work on the interior began to take place at the same time work was being done on the exterior of the car. All the seat cushions and frames were removed from the car to gain better access to interior woodwork.

All of the ceiling and clearstory panels were removed from the car due to their deteriorated condition. The old varnish was removed from all of the oak woodwork. The varnish stripping process took volunteers several years to complete. In June 1997, the last

of the old varnish was finally removed from the interior woodwork. Volunteers then bleached the oak woodwork in an effort to remove the water stains that had occurred due to the deteriorated roof that was on the car in the 1970's and 1980's. Filling, sanding, staining and varnishing steps followed.

Replacement ceiling and head lining panels were made out of over-size pieces of Masonite. The panels were primed and finished with two coats of paint prior to being installed. The finish color was matched to the old panels that had been removed.

One of the most time consuming and costly aspects of the project was rebuilding and re-upholstering the (30) sets of seat cushions. The first challenge was to locate a source for the red mohair upholstery. Utilizing some of the existing material as a sample, a supplier for the mohair was located. The material cost over \$80/yd. with 100 yards of material needed to complete the car. Volunteers spent numerous hours stripping the upholstery and nails from the old cushions in order to get them prepared for the new upholstery. Once this was complete, the stripped cushions were turned over to a local upholsterer for the actual work, one of the few aspects of the project contracted out. The seats turned out beautifully, and accurately represent the seats in their 1944 appearance.

Once the work on the exterior of the car was complete, the efforts focused on finishing the car's interior. All of the interior woodwork had to be stained with Golden Oak stain with three coats of varnish applied. The (30) seat frames and armrests were restored and installed once the varnishing was completed and the windows reinstalled. In addition to this work, all the brass such as window hardware, baggage racks and kerosene lamps had to be cleaned, polished and lacquered. The kerosene lamps, like everything else, were restored to once again be functional.

One of the more significant challenges standing in the way of completing this restoration project was to come up with a source for the window shades. After much research and effort the shade material was recreated by silk-screening the pattern onto a cotton fabric. The shades were then sewn into their finished dimensions and assembled onto the rollers.

The final restoration steps were completed in April 2003, following over 8000 hours of volunteer time and \$60,000 in expenditures. Project funding came from donations, approximately half from museum members and half from outside sources. Of these we wish to particularly acknowledge the generous support of the Mathews Foundation of St. Louis, Missouri.

The restoration project was coordinated by a project leader so that project objectives were maintained according to the time schedule and budget. Work sessions were typically held one weekend per month. Each month anywhere from 2 to 15 volunteers would show up and participate in the sessions. Also, whenever possible, volunteers would take parts and pieces home to work on them. This was done to help keep the project moving forward at all times.

A complete record of the project and the history of the car has been assembled. These records include extensive photographs, both historical and during the restoration

process, as well as documentation on the car's history and the restoration process (scope, costs, schedules).

### **On Display**

The coach is now on display in the museum's Coach Shed, where the public can view Copper Range No. 60 restored in a historically accurate manner. An interpretive panel is under construction, highlighting the car's unique history, especially its role as the country's only functioning school train.

Copper Range No. 60 will be rolled out for the media and the general public in September to commemorate the 57th anniversary of the end of Copper Range passenger service. Tours will be provided for the public and volunteers and donors will have the opportunity to ride in the car for a rare excursion. A presentation on the history of the Copper Range Railroad, coach No. 60 and the restoration process will also be part of the planned activities.

## Copper Range #60

Second-Class Coach, American Car & Foundry, Lot 2504, February 1903

### MC HOME COLLECTION

DSS&A 213  
WC OP  
GN 3261  
MLS&W 63  
WC 63  
CR 25  
**CR 60**  
WC 306  
C&NW 1099  
WFC 2  
EJ&S 2  
LS&I 1  
SOO 957  
C&NW 613  
CB&Q 1900  
SOO 1257  
SOO 920  
DSS&A 701  
SOO 1210  
SOO 552  
LS&I 64  
KGB&W 77  
MP&N 2

### STEAM DIESELS WOODEN PASS STEEL PASS WOODEN FRT STEEL FRT CABOOSES SERVICE

NOTE: CR #60's restoration is complete and is now on display in the museum's Coach Shed. For more details on the restoration, click here.

Copper Range #60 was built as a second-class coach in 1903 by the American Car & Foundry Co. (AC&F), at the Jeffersonville, Indiana works, one of a series of six identical cars numbered 55-60. The difference between a first class and second class coach was primarily limited to its interior appointments such as seat coverings, type of wood, and lighting fixtures. The #60 was a typical open-platform car of the period. It was one of six identical cars ordered by the five-year-old Copper Range Railroad under AC&F Lot #2504. The coach was delivered in a color described as a green, brighter than Pullman green and striped in gold.

The interior of the coach was originally stained and varnished with a Golden Oak finish. In addition to solid oak woodwork, the car had oak veneer headlining and ceiling panels. The seats were upholstered with cane (rattan). Heat to the car was provided by steam from a locomotive, while lighting was provided by four 2-burner kerosene lamps mounted on the ceiling. Electric side lights were added to the car in 1916. During the 1944 rebuild, the oak veneer ceiling panels were replaced with painted panels and the rattan seats were changed to red plush (from coach #51).

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#60, September 20, 2003.



#60, on display September 20, 2003.



#60 restored, March 16, 2003.



#60 under restoration, November 7, 1999.

<http://www.midcontinent.org/collectn/woodpas/cr60.html>

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