

= PRR 4800 =

PRR 4800 , nicknamed " Old Rivets " , is a GG1 @-@ class electric locomotive located at the Railroad Museum of Pennsylvania , outside of Strasburg , Pennsylvania in the United States . It is the prototype GG1 and was originally numbered 4899 . Built by General Electric in 1934 , the locomotive competed against a prototype , the R1 , built by rival company Westinghouse . 4800 was kept in service by the Pennsylvania Railroad and its successors , Penn Central and Conrail , until 1979 . It was sold the next year to a local chapter of the National Railway Historical Society . 4800 was dedicated in 1982 at the Railroad Museum of Pennsylvania and was designated a Historic Mechanical Engineering Landmark in 1983 .

= = Construction and testing = =

In 1933 , the Pennsylvania Railroad decided to replace the P5 , and instructed General Electric and Westinghouse to design an electric locomotive that was more powerful than the P5 , capable of speeds of 100 miles per hour (161 km / h) , have a lighter axle load and to be double @-@ ended with a cab in the center of the carbody . Westinghouse designed the R1 # 4800 , and General Electric submitted the GG1 , then numbered 4899 .

The frames , running gear and riveted body for the prototype GG1 were built by Baldwin Locomotive Works . The partially built locomotive was then shipped to the General Electric factory in Erie , Pennsylvania for the installation of its electrical components . Twelve traction motors , two on each of the GG1 's six powered axles , produced 4 @,@ 620 horsepower (3 @,@ 450 kW) that was transmitted to the 57 @-@ inch (1 @,@ 400 mm) driving wheels by a quill drive . Unlike other GG1s , access steps were installed at each end of the locomotive to ease maintenance of the pantographs ; the pantographs were mechanically linked to a safety plate that blocked access to the steps when the pantographs were raised . The finished locomotive was 79 feet 6 inches (24 @.@ 23 m) long and 16 feet (5 m) tall , with both of its pantographs lowered .

GG1 4899 was extensively tested against the R1 from August to November 1934 ; both locomotives were substituted on regular passenger service between New York City and Philadelphia . Both locomotives were found to be capable of rapid acceleration with short @-@ term power outputs of up to 10 @,@ 000 horsepower (7 @,@ 500 kW) . The GG1 , however , did not exert as much lateral force on the rails as the R1 , because it was articulated , which allowed for a smaller turning radius than the rigid R1 . The Pennsylvania chose the GG1 over the R1 and immediately ordered another 57 locomotives . As the number scheme used by the Pennsylvania prevented the first locomotive in the class from being 4899 , the R1 and GG1 prototypes , essentially , swapped numbers . The Pennsylvania also enlisted the assistance of Raymond Loewy to refine the aesthetics of the GG1s . Loewy recommended that all subsequent models of the class should have a welded body rather than the riveted body on the prototype . This led to the nickname " Old Rivets " being given to 4800 .

= = Operation and preservation = =

On January 28 , 1935 , 4800 inaugurated electric passenger service between Washington , D.C. and Philadelphia by pulling a charter train for railroad and government officials ; 4800 set a speed record of 102 miles per hour (164 km / h) outside of Landover , Maryland on the return trip . Regular passenger service began on February 10 , 1935 . 4800 remained in regular passenger service with the Pennsylvania , until it joined production GG1s 4801 ? 4857 in the pool of 90 @-@ mile @-@ per @-@ hour (140 km / h) geared freight locomotives . It had its steam generator removed in June 1960 , about a year after hauling a National Railway Historical Society @-@ chartered excursion to commemorate its 25th birthday .

4800 continued to haul freight for the Pennsylvania and its successors Penn Central and Conrail . In 1976 , Conrail gave 4800 a red , white and blue paint scheme to commemorate the United States Bicentennial . It was also the only GG1 to wear Conrail blue paint ; all the other Conrail GG1s

remained in black . 4800 was eventually retired by Conrail in October 1979 after the locomotive 's main transformer failed , which was deemed too expensive to repair .

4800 was sold by Conrail in 1980 to the Lancaster @-@ chapter of the National Railway Historical Society for the scrap @-@ value price of \$ 30 @,@ 000 . The locomotive was given a cosmetic restoration back to its 1935 appearance by the nearby Strasburg Rail Road and volunteers . 4800 was dedicated and put on display at the Railroad Museum of Pennsylvania on November 20 , 1982 . It was designated a Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers (ASME) on April 23 , 1983 .

In 2012 , PRR 4800 was inducted into the North America Railway Hall of Fame for its contribution to the railway industry .