



The American Society of
Mechanical Engineers

REGIONAL MECHANICAL ENGINEERING HERITAGE COLLECTION

LOCOMOTIVE DEDICATION CEREMONY


Kenefick Park • Omaha, Nebraska

June 7, 1994



Locomotives 4023 and 6900 are examples of the world's largest motive power in the steam and diesel eras. These locomotives are on permanent display at Kenefick Park, which was established in 1989 in honor of noted former Union Pacific chairman, John C. Kenefick.

The 4023 was one of twenty-five famous "Big Boy" type simple articulated locomotives lauded in the industry and press as the highest horsepower, heaviest and longest steam locomotives ever built, developing seven thousand horsepower at their seventy miles per hour design speed.

 *Locomotive 4023 was a feature display at the Omaha Shops until being moved to Kenefick Park.*





*World's largest
single unit diesel
locomotives required four
axle trucks to distribute
their heavy weight and
keep within track
loading limits.*

The Big Boy type was designed at the Omaha headquarters of Union Pacific under the personal direction of the road's noted mechanical head, Otto Jabelmann. The original twenty locomotives of this type were built by American Locomotive Company in Schenectady, New York, in the fall of 1941. They were built in preparation for the nation's probable entry into World War II because no proven diesel freight locomotive was yet in production.

These 4-8-8-4 type locomotives were specifically designed to haul fast, heavy eastbound freight trains between Ogden, Utah, and Green River, Wyoming, over the 1.14 percent eastbound grade. The 4023 was one of five additional units built in 1944 under government authority in preparation for a twenty-five percent increase in traffic due to the shift from European to Pacific war operations. All of the Big Boys were coal-burning,

stoker-fired locomotives.

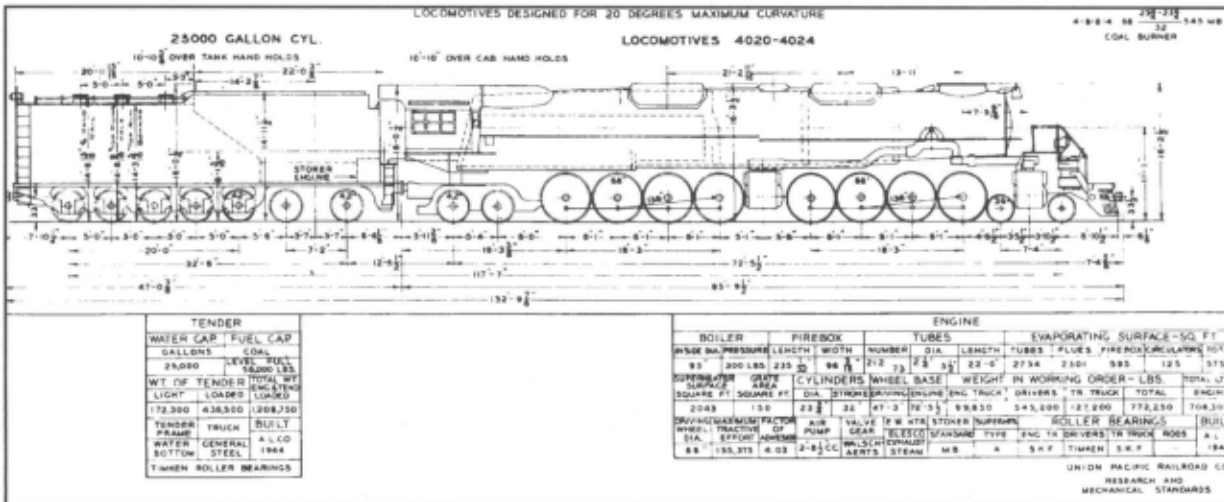
After the war, the Big Boy locomotives were slowly superceded on the original assignment by diesel locomotives, finally ending their operation in 1959 in Cheyenne-Laramie service over Wyoming's famous Sherman Hill.

The 4023 was moved to Omaha and put on display in front of the road's Omaha Shops complex until being hand moved to Kenefick Park.



In their final years, Big Boys transported a variety of commodities over Wyoming's famous Sherman Hill.

*(Below)
Diagram for 4-8-8-4
Big Boy class.*




per hour was attainable with heavy tonnage trains on level track. The Electro-Motive Division of General Motors built the 6900's at their LaGrange, Illinois plant.

The Centennials were powered by two 16-645 E3A diesel engines. Power was transmitted to the wheels through eight D-77X electric traction motors, one for each axle set of wheels.

These locomotives were also equipped with speed recorders, dynamic braking, cab signals and turbochargers.

Unlike the Big Boys, which were designed for a specific district of operation, the Centennials were designed to operate over all the main lines of the Union Pacific including the long runs to Los Angeles and Portland. While the Big Boys were, particularly during World War II, assigned to passenger moves such as troop trains, the Centennials arrived about the time passenger service was ending.

 *Engineer's side view of Centennial locomotive illustrates the extraordinary length of the locomotive.*



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UNION PACIFIC 4-8-8-4 STEAM LOCOMOTIVE


UNION PACIFIC DDA40X DIESEL-ELECTRIC LOCOMOTIVE NO. 6900

1944 AND 1969

TO PULL HEAVY FREIGHT TRAINS ON FAST SCHEDULES OVER LONG DISTANCES, AND MOUNTAIN GRADES, THE UNION PACIFIC RAILROAD PURCHASED SOME OF THE LARGEST STEAM AND DIESEL-ELECTRIC LOCOMOTIVES EVER BUILT. NO. 4023 IS ONE OF TWENTY-FIVE "BIG BOY" ARTICULATED STEAM ENGINES OPERATED BETWEEN 1941 AND 1959. NO. 6900 WAS THE FIRST OF FORTY-SEVEN 6600-HP "CENTENNIAL" DIESEL-ELECTRIC THAT SAW SERVICE FROM 1969 TO 1984. WHILE BOTH DESIGNS WERE UNIQUE TO THE UNION PACIFIC, THEY INCORPORATED MANY OF THE BEST FEATURES OF OTHER CONTEMPORARY AMERICAN LOCOMOTIVES.



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 *The commemorative plaque will be permanently displayed at Kenefick Park.* While the 6900 was a freight locomotive beyond compare in railroading, the last surviving operating Centennial, the 6936, now pulls special passenger trains almost exclusively as a member of the Union Pacific's famous historical equipment roster.

Centennial 6936, along with Union Pacific's two operating steam locomotives, are based at Cheyenne, Wyoming.

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